

33178SEQLIST.TXT

SEQUENCE LISTING

<110> Bodian, Dale
Daouti, Sherif
Kumar, Chandrika
Latario, Brian
Quintavalla, Joseph

JC20 Dec 2003

<120> High throughput functional genomic screening methods for osteoarthritis

<130> 4-33178

<150> 60/463,933
<151> 2003-04-18

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<213> homo sapiens

<400> 23
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Arg Ile Arg Gly Arg Asp Gln Gly	Pro Asn Val Cys Ala Leu Gln Gln		
35	40	45	
Ile Leu Gly Thr Lys Lys Tyr Phe Ser Thr Cys Lys Asn Trp Tyr			
50	55	60	
Lys Lys Ser Ile Cys Gly Gln Lys Thr Thr Val Leu Tyr Glu Cys Cys			
65	70	75	80
Pro Gly Tyr Met Arg Met Glu Gly Met Lys Gly Cys Pro Ala Val Leu			
85	90	95	
Pro Ile Asp His Val Tyr Gly Thr Leu Gly Ile Val Gly Ala Thr Thr			
100	105	110	
Thr Gln Arg Tyr Ser Asp Ala Ser Lys Leu Arg Glu Glu Ile Glu Gly			
115	120	125	
Lys Gly Ser Phe Thr Tyr Phe Ala Pro Ser Asn Glu Ala Trp Asp Asn			
130	135	140	
Leu Asp Ser Asp Ile Arg Arg Gly Leu Glu Ser Asn Val Asn Val Glu			
145	150	155	160
Leu Leu Asn Ala Leu His Ser His Met Ile Asn Lys Arg Met Leu Thr			
165	170	175	
Lys Asp Leu Lys Asn Gly Met Ile Ile Pro Ser Met Tyr Asn Asn Leu			
180	185	190	
Gly Leu Phe Ile Asn His Tyr Pro Asn Gly val val Thr Val Asn Cys			
195	200	205	
Ala Arg Ile Ile His Gly Asn Gln Ile Ala Thr Asn Gly Val Val His			
210	215	220	
Val Ile Asp Arg Val Leu Thr Gln Ile Gly Thr Ser Ile Gln Asp Phe			
225	230	235	240
Ile Glu Ala Glu Asp Asp Leu Ser Ser Phe Arg Ala Ala Ala Ile Thr			
245	250	255	
Ser Asp Ile Leu Glu Ala Leu Gly Arg Asp Gly His Phe Thr Leu Phe			
260	265	270	
Ala Pro Thr Asn Glu Ala Phe Glu Lys Leu Pro Arg Gly Val Leu Glu			
275	280	285	
Arg Phe Met Gly Asp Lys Val Ala Ser Glu Ala Leu Met Lys Tyr His			
290	295	300	
Ile Leu Asn Thr Leu Gln Cys Ser Glu Ser Ile Met Gly Gly Ala Val			
305	310	315	320
Phe Glu Thr Leu Glu Gly Asn Thr Ile Glu Ile Gly Cys Asp Gly Asp			
325	330	335	
Ser Ile Thr Val Asn Gly Ile Lys Met Val Asn Lys Lys Asp Ile val			
340	345	350	
Thr Asn Asn Gly Val Ile His Leu Ile Asp Gln Val Leu Ile Pro Asp			
355	360	365	
Ser Ala Lys Gln Val Ile Glu Leu Ala Gly Lys Gln Gln Thr Thr Phe			
370	375	380	
Thr Asp Leu Val Ala Gln Leu Gly Leu Ala Ser Ala Leu Arg Pro Asp			
385	390	395	400
Gly Glu Tyr Thr Leu Leu Ala Pro Val Asn Asn Ala Phe Ser Asp Asp			
405	410	415	
Thr Leu Ser Met Val Gln Arg Leu Leu Lys Leu Ile Leu Gln Asn His			
420	425	430	
Ile Leu Lys Val Lys Val Gly Leu Asn Glu Leu Tyr Asn Gly Gln Ile			
435	440	445	
Leu Glu Thr Ile Gly Gly Lys Gln Leu Arg Val Phe Val Tyr Arg Thr			
450	455	460	
Ala Val Cys Ile Glu Asn Ser Cys Met Glu Lys Gly Ser Lys Gln Gly			
465	470	475	480
Arg Asn Gly Ala Ile His Ile Phe Arg Glu Ile Ile Lys Pro Ala Glu			
485	490	495	
Lys Ser Leu His Glu Lys Leu Lys Gln Asp Lys Arg Phe Ser Thr Phe			
500	505	510	
Leu Ser Leu Leu Glu Ala Ala Asp Leu Lys Glu Leu Leu Thr Gln Pro			
515	520	525	
Gly Asp Trp Thr Leu Phe Val Pro Thr Asn Asp Ala Phe Lys Gly Met			
530	535	540	
Thr Ser Glu Glu Lys Glu Ile Leu Ile Arg Asp Lys Asn Ala Leu Gln			

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Asn	Ile	Ile	Leu	Tyr	His	Leu	Thr	Pro	Gly	Val	Phe	Ile	Gly	Lys	Gly
					565				570					575	
Phe	Glu	Pro	Gly	Val	Thr	Asn	Ile	Leu	Lys	Thr	Thr	Gln	Gly	Ser	Lys
					580				585					590	
Ile	Phe	Leu	Lys	Glu	Val	Asn	Asp	Thr	Leu	Leu	Val	Asn	Glu	Leu	Lys
					595				600					605	
Ser	Lys	Glu	Ser	Asp	Ile	Met	Thr	Thr	Asn	Gly	Val	Ile	His	Val	Val
					610				615					620	
Asp	Lys	Leu	Leu	Tyr	Pro	Ala	Asp	Thr	Pro	Val	Gly	Asn	Asp	Gln	Leu
					625				630					635	
Leu	Glu	Ile	Leu	Asn	Lys	Leu	Ile	Lys	Tyr	Ile	Gln	Ile	Lys	Phe	Val
					645				650					655	
Arg	Gly	Ser	Thr	Phe	Lys	Glu	Ile	Pro	Val	Thr	Val	Tyr	Thr	Thr	Lys
					660				665					670	
Ile	Ile	Thr	Lys	Val	Val	Glu	Pro	Lys	Ile	Lys	Val	Ile	Glu	Gly	Ser
					675				680					685	
Leu	Gln	Pro	Ile	Ile	Lys	Thr	Glu	Gly	Pro	Thr	Leu	Thr	Lys	Val	Lys
					690				695					700	
Ile	Glu	Gly	Glu	Pro	Glu	Phe	Arg	Leu	Ile	Lys	Glu	Gly	Glu	Thr	Ile
					705				710					715	
Thr	Glu	Val	Ile	His	Gly	Glu	Pro	Ile	Ile	Lys	Lys	Tyr	Thr	Lys	Ile
					725				730					735	
Ile	Asp	Gly	Val	Pro	Val	Glu	Ile	Thr	Glu	Lys	Glu	Thr	Arg	Glu	Glu
					740				745					750	
Arg	Ile	Ile	Thr	Gly	Pro	Glu	Ile	Lys	Tyr	Thr	Arg	Ile	Ser	Thr	Gly
					755				760					765	
Gly	Gly	Glu	Thr	Glu	Glu	Thr	Leu	Lys	Lys	Leu	Leu	Gln	Glu	Glu	Val
					770				775					780	
Thr	Lys	Val	Thr	Lys	Phe	Ile	Glu	Gly	Gly	Asp	Gly	His	Leu	Phe	Glu
					785				790					795	
Asp	Glu	Glu	Ile	Lys	Arg	Leu	Leu	Gln	Gly	Asp	Thr	Pro	Val	Arg	Lys
					805				810					815	
Leu	Gln	Ala	Asn	Lys	Lys	Val	Gln	Gly	Ser	Arg	Arg	Arg	Leu	Arg	Glu
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Gly	Arg	Ser	Gln												
					835										

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<213> homo sapiens

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					20				25				30		
Gly	Gln	Glu	Asn	Gly	His	Val	Lys	Val	Asn	Gly	Asp	Ala	Ser	Pro	Ala
					35				40				45		
Ala	Ala	Glu	Ser	Gly	Ala	Lys	Glu	Glu	Leu	Gln	Ala	Asn	Gly	Ser	Ala
					50				55				60		
Pro	Ala	Ala	Asp	Lys	Glu	Glu	Pro	Ala	Ala	Ala	Gly	Ser	Gly	Ala	Ala
					65				70				75		80
Ser	Pro	Ser	Ser	Ala	Glu	Lys	Gly	Glu	Pro	Ala	Ala	Ala	Ala	Ala	Pro
					85				90				95		
Glu	Ala	Gly	Ala	Ser	Pro	Val	Glu	Lys	Glu	Ala	Pro	Ala	Glu	Gly	Glu
					100				105				110		
Ala	Ala	Glu	Pro	Gly	Ser	Ala	Thr	Ala	Ala	Glu	Gly	Glu	Ala	Ala	Ser
					115				120				125		
Ala	Ala	Ser	Ser	Thr	Ser	Ser	Pro	Lys	Ala	Glu	Asp	Gly	Ala	Thr	Pro
					130				135				140		
Ser	Pro	Ser	Asn	Glu	Thr	Pro	Lys	Lys	Lys	Lys	Lys	Arg	Phe	Ser	Phe
					145				150				155		160
Lys	Lys	Ser	Phe	Lys	Leu	Ser	Gly	Phe	Ser	Phe	Lys	Lys	Asn	Lys	Lys
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Glu	Ala	Gly	Glu	Gly	Glu	Ala	Glu	Ala	Pro	Ala	Ala	Glu	Gly	Gly	

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180	185	190
Lys Asp Glu Ala Ala Gly Gly Ala	Ala Ala Ala Ala Ala	Glu Ala Gly
195	200	205
Ala Ala Ser Gly Glu Gln Ala Ala Ala Pro Gly	Glu Glu Ala Ala Ala	
210	215	220
Gly Glu Glu Gly Ala Ala Gly Gly Asp Pro Gln	Glu Ala Lys Pro Gln	
225	230	235
Glu Ala Ala Val Ala Pro Glu Lys Pro Pro Ala Ser Asp	Glu Thr Lys	240
245	250	255
Ala Ala Glu Glu Pro Ser Lys Val Glu Glu Lys Lys Ala	Glu Glu Ala	
260	265	270
Gly Ala Ser Ala Ala Ala Cys Glu Ala Pro Ser Ala Ala	Gly Pro Gly	
275	280	285
Ala Pro Pro Glu Gln Glu Ala Ala Pro Ala Glu Glu Pro	Ala Ala Ala	
290	295	300
Ala Ala Ser Ser Ala Cys Ala Ala Pro Ser Gln Glu Ala Gln	Pro Glu	
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Cys Ser Pro Glu Ala Pro Pro Ala Glu Ala Ala Glu		320
325	330	

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<212> PRT

<213> homo sapiens

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Leu Lys Ala Cys Phe Ser Gly Leu Thr Gln Thr Glu Trp Gln His Arg			
35	40	45	
His Thr Ala Gln Ser Ile Glu Thr Gln Ser Thr Ser Ser Glu Glu Leu			
50	55	60	
Val Pro Ser Pro Pro Ser Pro Leu Pro Pro Pro Arg Val Tyr Lys Pro			
65	70	75	80
Cys Phe Val Cys Gln Asp Lys Ser Ser Gly Tyr His Tyr Gly Val Ser			
85	90	95	
Ala Cys Glu Gly Cys Lys Gly Phe Arg Arg Ser Ile Gln Lys Asn			
100	105	110	
Met Ile Tyr Thr Cys His Arg Asp Lys Asn Cys Val Ile Asn Lys Val			
115	120	125	
Thr Arg Asn Arg Cys Gln Tyr Cys Arg Leu Gln Lys Cys Phe Glu Val			
130	135	140	
Gly Met Ser Lys Glu Ser Val Arg Asn Asp Arg Asn Lys Lys Lys			
145	150	155	160
Glu Thr Ser Lys Gln Glu Cys Thr Glu Ser Tyr Glu Met Thr Ala Glu			
165	170	175	
Leu Asp Asp Leu Thr Glu Lys Ile Arg Lys Ala His Gln Glu Thr Phe			
180	185	190	
Pro Ser Leu Cys Gln Leu Gly Lys Tyr Thr Thr Asn Ser Ser Ala Asp			
195	200	205	
His Arg Val Arg Leu Asp Leu Gly Leu Trp Asp Lys Phe Ser Glu Leu			
210	215	220	
Ala Thr Lys Cys Ile Ile Lys Ile Val Glu Phe Ala Lys Arg Leu Pro			
225	230	235	240
Gly Phe Thr Gly Leu Thr Ile Ala Asp Gln Ile Thr Leu Leu Lys Ala			
245	250	255	
Ala Cys Leu Asp Ile Leu Ile Leu Arg Ile Cys Thr Arg Tyr Thr Pro			
260	265	270	
Glu Gln Asp Thr Met Thr Phe Ser Asp Gly Leu Thr Leu Asn Arg Thr			
275	280	285	
Gln Met His Asn Ala Gly Phe Gly Pro Leu Thr Asp Leu Val Phe Thr			
290	295	300	
Phe Ala Asn Gln Leu Leu Pro Leu Glu Met Asp Asp Thr Glu Thr Gly			
305	310	315	320
Leu Leu Ser Ala Ile Cys Leu Ile Cys Gly Asp Arg Gln Asp Leu Glu			

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Glu	Pro	Thr	Lys	325	330	335									
340	Val	Asp	Lys	Leu	Gln	Glu	Pro	Leu	Leu	Glu	Ala	Leu			
Lys	Ile	Tyr	Ile	Arg	Lys	Arg	Arg	Pro	Ser	Lys	Pro	His	Met	Phe	Pro
355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430
Lys	Ile	Leu	Met	Lys	Ile	Thr	Asp	Leu	Arg	Ser	Ile	Ser	Ala	Lys	Gly
385	390	395	400	405	410	415	420	425	430	435	440	445	440	445	445
Ala	Glu	Arg	Val	Ile	Thr	Leu	Lys	Met	Glu	Ile	Pro	Gly	Ser	Met	Pro
Pro	Leu	Ile	Gln	Glu	Met	Leu	Glu	Asn	Ser	Glu	Gly	His	Glu	Pro	Leu
Thr	Pro	Ser	Ser	Ser	Gly	Asn	Thr	Ala	Glu	His	Ser	Pro	Ser	Ile	Ser
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<213> homo sapiens

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Thr	Arg	Asn	Arg	Cys	Gln	Tyr	Cys	Arg	Leu	Gln	Lys	Cys	Phe	Glu	Val	20
Gly	Met	Ser	Lys	Glu	Ser	Val	Arg	Asn	Asp	Arg	Asn	Lys	Lys	Lys	Lys	35
Glu	Thr	Ser	Lys	Gln	Glu	Cys	Thr	Glu	Ser	Tyr	Glu	Met	Thr	Ala	Glu	50
Leu	Asp	Asp	Leu	Thr	Glu	Lys	Ile	Arg	Lys	Ala	His	Gln	Glu	Thr	Phe	65
Pro	Ser	Leu	Cys	Gln	Leu	Gly	Lys	Tyr	Thr	Thr	Asn	Ser	Ser	Ala	Asp	85
His	Arg	Val	Arg	Leu	Asp	Leu	Gly	Leu	Trp	Asp	Lys	Phe	Ser	Glu	Leu	100
Ala	Thr	Lys	Cys	Ile	Ile	Lys	Ile	Val	Glu	Phe	Ala	Lys	Arg	Leu	Pro	115
Gly	Phe	Thr	Gly	Leu	Thr	Ile	Ala	Asp	Gln	Ile	Thr	Leu	Leu	Lys	Ala	130
Ala	Cys	Leu	Asp	Ile	Leu	Ile	Leu	Arg	Ile	Cys	Thr	Arg	Tyr	Thr	Pro	145
Glu	Gln	Asp	Thr	Met	Thr	Phe	Ser	Asp	Gly	Leu	Thr	Leu	Asn	Arg	Thr	165
Gln	Met	His	Asn	Ala	Gly	Phe	Gly	Pro	Leu	Thr	Asp	Leu	Val	Phe	Thr	180
Phe	Ala	Asn	Gln	Leu	Leu	Pro	Leu	Glu	Met	Asp	Asp	Thr	Glu	Thr	Gly	195
Leu	Leu	Ser	Ala	Ile	Cys	Leu	Ile	Cys	Gly	Asp	Arg	Gln	Asp	Leu	Glu	210
Glu	Pro	Thr	Lys	Val	Asp	Lys	Leu	Gln	Glu	Pro	Leu	Leu	Glu	Ala	Leu	225
Lys	Ile	Tyr	Ile	Arg	Lys	Arg	Arg	Pro	Ser	Lys	Pro	His	Met	Phe	Pro	240
Lys	Ile	Leu	Met	Lys	Ile	Thr	Asp	Leu	Arg	Ser	Ile	Ser	Ala	Lys	Gly	260
Ala	Glu	Arg	Val	Ile	Thr	Leu	Lys	Met	Glu	Ile	Pro	Gly	Ser	Met	Pro	275
Pro	Leu	Ile	Gln	Glu	Met	Leu	Glu	Asn	Ser	Glu	Gly	His	Glu	Pro	Leu	290
Thr	Pro	Ser	Ser	Ser	Gly	Asn	Thr	Ala	Glu	His	Ser	Pro	Ser	Ile	Ser	305
Pro	Ser	Ser	Val	Glu	Asn	Ser	Gly	Val	Ser	Gln	Ser	Pro	Leu	Val	Gln	325

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<211> 227

<212> PRT

<213> homo sapiens

<400> 27

Met Gly Gly Lys Leu Ser Lys Lys Lys Gly Tyr Asn Val Asn Asp
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 Glu Glu Gly Thr Pro Lys Glu Ser Glu Pro Gln Ala Ala Ala Glu Pro
 35 40 45
 Ala Glu Ala Lys Glu Gly Lys Glu Lys Pro Asp Gln Asp Ala Glu Gly
 50 55 60
 Lys Ala Glu Glu Lys Glu Gly Glu Lys Asp Ala Ala Ala Ala Lys Glu
 65 70 75 80
 Glu Ala Pro Lys Ala Glu Pro Glu Lys Thr Glu Gly Ala Ala Glu Ala
 85 90 95
 Lys Ala Glu Pro Pro Lys Ala Pro Glu Gln Glu Gln Ala Ala Pro Gly
 100 105 110
 Pro Ala Ala Gly Gly Glu Ala Pro Lys Ala Ala Glu Ala Ala Ala Ala
 115 120 125
 Pro Ala Glu Ser Ala Ala Pro Ala Ala Gly Glu Glu Pro Ser Lys Glu
 130 135 140
 Glu Gly Glu Pro Lys Lys Thr Glu Ala Pro Ala Ala Pro Ala Ala Gln
 145 150 155 160
 Glu Thr Lys Ser Asp Gly Ala Pro Ala Ser Asp Ser Lys Pro Gly Ser
 165 170 175
 Ser Glu Ala Ala Pro Ser Ser Lys Glu Thr Pro Ala Ala Thr Glu Ala
 180 185 190
 Pro Ser Ser Thr Pro Lys Ala Gln Gly Pro Ala Ala Ser Ala Glu Glu
 195 200 205
 Pro Lys Pro Val Glu Ala Pro Ala Ala Asn Ser Asp Gln Thr Val Thr
 210 215 220
 Val Lys Glu
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<211> 447

<212> PRT

<213> homo sapiens

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 20 25 30
 Val Gly Leu Gly Ile Asn Pro Phe Ala Asp Gly Met Gly Ala Phe Lys
 35 40 45
 Leu Asn Pro Ser Ser His Glu Leu Ala Ser Ala Gly Gln Thr Ala Phe
 50 55 60
 Thr Ser Gln Ala Pro Gly Tyr Ala Ala Ala Ala Leu Gly His His
 65 70 75 80
 His His Pro Gly His Val Gly Ser Tyr Ser Ala Ala Phe Asn Ser
 85 90 95
 Thr Arg Asp Phe Leu Phe Arg Asn Arg Gly Phe Gly Asp Ala Ala Ala
 100 105 110
 Ala Ala Ser Ala Gln His Ser Leu Phe Ala Ala Ser Ala Gly Gly Phe
 115 120 125
 Gly Gly Pro His Gly His Thr Asp Ala Ala Gly His Leu Leu Phe Pro
 130 135 140
 Gly Leu His Glu Gln Ala Ala Gly His Ala Ser Pro Asn Val Val Asn
 145 150 155 160
 Gly Gln Met Arg Leu Gly Phe Ser Gly Asp Met Tyr Pro Arg Pro Glu
 165 170 175
 Gln Tyr Gly Gln Val Thr Ser Pro Arg Ser Glu His Tyr Ala Ala Pro
 180 185 190
 Gln Leu His Gly Tyr Gly Pro Met Asn Val Asn Met Ala Ala His His

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		195		200		205									
Gly	Ala	Gly	Ala	Phe	Phe	Arg	Tyr	Met	Arg	Gln	Pro	Ile	Lys	Gln	Glu
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Leu	Ile	Cys	Lys	Trp	Ile	Glu	Pro	Glu	Gln	Leu	Ala	Asn	Pro	Lys	Lys
225						230				235				240	
Ser	Cys	Asn	Lys	Thr	Phe	Ser	Thr	Met	His	Glu	Leu	Val	Thr	His	Val
					245				250				255		
Thr	Val	Glu	His	Val	Gly	Gly	Pro	Glu	Gln	Ser	Asn	His	Ile	Cys	Phe
				260				265				270			
Trp	Glu	Glu	Cys	Pro	Arg	Glu	Gly	Lys	Pro	Phe	Lys	Ala	Lys	Tyr	Lys
				275		280					285				
Leu	Val	Asn	His	Ile	Arg	Val	His	Thr	Gly	Glu	Lys	Pro	Phe	Pro	Cys
				290		295				300					
Pro	Phe	Pro	Gly	Cys	Gly	Lys	Val	Phe	Ala	Arg	Ser	Glu	Asn	Leu	Lys
305					310					315				320	
Ile	His	Lys	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Phe	Lys	Cys	Glu	Phe
					325				330				335		
Glu	Gly	Cys	Asp	Arg	Arg	Phe	Ala	Asn	Ser	Ser	Asp	Arg	Lys	Lys	His
			340					345				350			
Met	His	Val	His	Thr	Ser	Asp	Lys	Pro	Tyr	Leu	Cys	Lys	Met	Cys	Asp
				355			360				365				
Lys	Ser	Tyr	Thr	His	Pro	Ser	Ser	Leu	Arg	Lys	His	Met	Lys	Val	His
				370			375				380				
Glu	Ser	Ser	Ser	Gln	Gly	Ser	Gln	Pro	Ser	Pro	Ala	Ala	Ser	Ser	Gly
385					390					395				400	
Tyr	Glu	Ser	Ser	Thr	Pro	Pro	Thr	Ile	Val	Ser	Pro	Ser	Thr	Asp	Asn
					405				410				415		
Pro	Thr	Thr	Ser	Ser	Leu	Ser	Pro	Ser	Ser	Ser	Ala	Val	His	His	Thr
					420			425				430			
Ala	Gly	His	Ser	Ala	Leu	Ser	Ser	Asn	Phe	Asn	Glu	Trp	Tyr	Val	
				435			440				445				

<210> 29
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<212> PRT
<213> homo sapiens

<400> 29
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 1 5 10 15
 Ala Ile Leu Ser Glu Glu Asp Arg Val Val Val Ile Arg Phe Gly His
 20 25 30
 Asp Trp Asp Pro Thr Cys Met Lys Met Asp Glu Val Leu Tyr Ser Ile
 35 40 45
 Ala Glu Lys Val Lys Asn Phe Ala Val Ile Tyr Leu Val Asp Ile Thr
 50 55 60
 Glu Val Pro Asp Phe Asn Lys Met Tyr Glu Leu Tyr Asp Pro Cys Thr
 65 70 75 80
 Val Met Phe Phe Phe Arg Asn Lys His Ile Met Ile Asp Leu Gly Thr
 85 90 95
 Gly Asn Asn Asn Lys Ile Asn Trp Ala Met Glu Asp Lys Gln Glu Met
 100 105 110
 Val Asp Ile Ile Glu Thr Val Tyr Arg Gly Ala Arg Lys Gly Arg Gly
 115 120 125
 Leu Val Val Ser Pro Lys Asp Tyr Ser Thr Lys Tyr Arg Tyr
 130 135 140

<210> 30
<211> 1403
<212> DNA
<213> homo sapiens

<400> 30 ccgggtgagt gagagagttt gttgggttgtt ggccggagga aaggcggaaag actcatcgga 60
gcgtgtggat tttagccgcc gcattttta acccttagatc tcgaaaatgca tcgtgattcc 120
tgtccattqq actqttaaqqt ttatqttaqqc aatcttggaa acaatggcaa caagacggaa 180

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ttggAACGGG	CTTTGGCTA	CTATGGACCA	CTCCGAAGTG	TGTGGGTTGC	TAGAAACCCA	240
CCC GGCTTTG	CTTTGTGTA	ATT TGAAGAT	CCCCGAGATG	CAGCTGATG	AGTCAGAGAG	300
CTAGATGGAA	GAACACTATG	TGGCTGCCGT	GTAAGAGTGG	AACTGTCGAA	TGGTAAAAAA	360
AGAAGTAGAA	ATCGGGCCC	ACCTCCCTCT	TGGGGTCGTC	GCCCTCGAGA	TGATTATCGT	420
AGGAGGAGTC	CTCCACCTCG	TCGCAGATCT	CCAAGAAGGA	GAAGCTTC	TCGCAGCCGG	480
AGCAGGTCCC	TTTCTAGAGA	TAGGAGAAGA	GAGAGATCG	TGTCTCGGGA	GAGAAATCAC	540
AAGCCGTCCC	GATCCTTC	TAGGTCTCGT	AGTCGATCTA	GGTCATAATG	AAGGAAATAG	600
AAGACAGTTT	GCAAGAGAAG	TGGTGTACAG	GAAATTACTT	CATTGACAG	GAGTATGTAC	660
AGAAAATTCA	AGTTTTGTTT	GAGACTTCAT	AAGCTTGGT	CATTTTAAG	ATGTTTTCAG	720
TGTTCAAATC	TGTTGTCTC	TTGAAACAGT	GACACAAAGG	TGTAATTCTC	TATGGTTGA	780
AATGGATCAT	ACGAGGCATG	TAATACCAAG	AATTGTTACT	TTACAATG	CCCTTAAGCA	840
AAATTGAATT	TGCTTGAAC	TTTTAGTTAT	GCACAGACTG	ATAATAAAACC	TCTAAACCTG	900
CCCAGCGGAA	GTGTGTTTT	TTTAAATT	AAATACAGAA	ACAACCTGGCA	AAAATTGAAC	960
TAAGATTAC	TTTTTTCC	ATAGCTGGGA	TATAGGCTGC	AGCTATAGT	GAACAAGCAG	1020
TCTTTAAAAA	CTGCTGTGAA	ACACAGGCCA	TCAGGGAAAA	CGAAATGCTG	CACTATTAAA	1080
TTAGAGGTTT	TTGAAAATC	CAACTCTCAT	CCTGGGCAGA	GGTTGCCTAG	TTGGTATAGA	1140
ATGTTAAGTT	TCAAGAAAGT	TTACCTTGC	TTTAGGTCT	AAAGTTCTT	TTTGATTGCT	1200
GTATATGGAT	ACATGGCTGT	TCGTGACATT	CTTATGTGC	AAATTGTGA	TTTCAAAAAT	1260
GTCTGCCAG	TTAAGGGTA	CATTGAGAG	CCGAACCTTG	AGTTACTGTG	CAAGATTTT	1320
TTTCATGCT	GTCATTGTA	ATATGTTTG	TGAGAACCT	TGGGATTAA	GTGGGTTA	1380
CAAATTGTTA	AAAAAAAAAA	AAA				1403

<210> 31

<211> 164

<212> PRT

<213> homo sapiens

<400> 31

Met	His	Arg	Asp	Ser	Cys	Pro	Leu	Asp	Cys	Lys	Val	Tyr	Val	Gly	Asn
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Leu	Gly	Asn	Asn	Gly	Asn	Lys	Thr	Glu	Leu	Glu	Arg	Ala	Phe	Gly	Tyr
						20		25		30					
Tyr	Gly	Pro	Leu	Arg	Ser	Val	Trp	Val	Ala	Arg	Asn	Pro	Pro	Gly	Phe
						35		40		45					
Ala	Phe	Val	Glu	Phe	Glu	Asp	Pro	Arg	Asp	Ala	Ala	Asp	Ala	Val	Arg
						50		55		60					
Glu	Leu	Asp	Gly	Arg	Thr	Leu	Cys	Gly	Cys	Arg	Val	Arg	Val	Glu	Leu
						65		70		75				80	
Ser	Asn	Gly	Glu	Lys	Arg	Ser	Arg	Asn	Arg	Gly	Pro	Pro	Pro	Ser	Trp
						85		90						95	
Gly	Arg	Arg	Pro	Arg	Asp	Asp	Tyr	Arg	Arg	Arg	Ser	Pro	Pro	Pro	Arg
						100		105		110					
Arg	Arg	Ser	Pro	Arg	Arg	Arg	Ser	Phe	Ser	Arg	Ser	Arg	Ser		
						115		120		125					
Leu	Ser	Arg	Asp	Arg	Arg	Arg	Glu	Arg	Ser	Leu	Ser	Arg	Glu	Arg	Asn
						130		135		140					
His	Lys	Pro	Ser	Arg	Ser	Phe	Ser	Arg	Ser	Arg	Ser	Arg	Ser		
						145		150		155				160	
Asn	Glu	Arg	Lys												

<210> 32

<211> 1972

<212> DNA

<213> homo sapiens

<400> 32

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Catgagcgac	agcggcgcagc	agaactacgg	cgagcgggaa	tcccgttctg	cttccagaag	180
tggaaagtgc	cacggatcg	ggaaatctgc	aaggcatacc	cctgcaagg	ctcgctccaa	240
ggaagattcc	aggcggttcca	gatcaaagt	caggcccga	tctgaatcta	ggtcttagatc	300
cagaagaagc	tcccgaaggc	attatacccg	gtcacgg	cgtccccgt	cccatagacg	360
atcacgtac	aggctttaca	gtcgagatta	tcgttagacgg	cacagccaca	gccattctcc	420
catgtctact	cgcaggcg	atgttggaa	tcgggcaa	cctgatccta	actgttgtct	480
tggagtat	gggctgagct	tgtacaccac	agaaagagat	ctaagagaag	tgttctctaa	540
atatggccc	attgccat	tgtctattgt	atatgaccag	cagtcttaggc	gttcaagagg	600

33178SEQLIST.TXT

atttgcctt	gtatattttg	aaaatgtaga	tgatgccaag	gaagctaaag	aacgtgccaa	660
tggaatggag	cttgatgggc	gtaggatcg	agttgatttc	tctataacaa	aaagaccaca	720
tacgccaaca	ccaggaattt	acatggggag	acctacccat	ggcagctctc	gccgtcggga	780
ttactatgac	agaggatatg	atcgccccata	tgatgatcg	gactactata	gcagatcata	840
cagaggagga	ggtggaggag	gaggaggatg	gagagctgcc	caagacaggg	atcagattta	900
tagaaggcgg	tcaccccttc	cttactatag	tcgtggagga	tacagatcac	gttccagatc	960
tcgatcatac	tcacccctcg	gctattaaag	catgaagact	ttctgaaacc	tgccttagag	1020
ctggatattt	gtttgtggc	aatattttt	attgtcttctt	gtttaaaaag	tgaacagtgc	1080
ctagtgaagt	taggtgactt	ttacacctt	tacgatgact	acttttgggt	gagtgtaaat	1140
gctgtttca	ttctgcattt	gtgttagttt	gtgcttgggt	ccaagttaaag	tgttttcaga	1200
aaagtatgtt	ttgcatgtat	ttttttacag	tctaaatttt	gactgctgag	aagtttctat	1260
tgtacaaaac	ttcatataaa	aggttttttt	actgaatcca	gggttattctg	aagatcgaag	1320
cctgtgtaaa	atgctaccaa	atgccccaaa	gcaacaataa	acagtttgat	ttttactttt	1380
ctttctaaaca	tatcaatgct	tagcagaact	attcagattt	tcaagttaaag	atttaaagac	1440
aaatgcccgt	tttcctccag	tccatgaaac	ataccatact	tatatacctg	caactaagtg	1500
tttaaaattt	tgctctgttt	ctctgtactg	ctagtattag	aactaaaaat	cttaaaaatac	1560
agccagtgt	taatgcttat	atcaatgtgg	atttgcgc	ttttatgtaa	tctgtaatat	1620
gtatacgagg	aaatacgaag	agttacacag	tgtatgcctt	aaaaggctgt	ttctttaaagg	1680
tgttacaagg	ggataatggt	attcaacta	gttacagca	agtgacaata	cattccacca	1740
caaatacact	cttggctttc	tagtttttag	actatatgaa	aaaacgggt	gtttcaaagt	1800
acatgataag	ggaacactat	acctgtcatg	gatgaactga	agactttgcc	tgttcatttt	1860
ttaaatattt	tttcaggc	cttgcattac	caaaggaggc	ccaatttcac	tcaaatgttt	1920
tgagaactgt	gtttaaataa	acgcaatga	aaagaaaaaa	aaaaaaaaaa	aa	1972

<210> 33

<211> 288

<212> PRT

<213> homo sapiens

<400> 33

Met	Ser	Asp	Ser	Gly	Glu	Gln	Asn	Tyr	Gly	Glu	Arg	Glu	Ser	Arg	Ser	
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Ala	Ser	Arg	Ser	Gly	Ser	Ala	His	Gly	Ser	Gly	Lys	Ser	Ala	Arg	His	
						20			25				30			
Thr	Pro	Ala	Arg	Ser	Arg	Ser	Lys	Glu	Asp	Ser	Arg	Arg	Ser	Arg	Ser	
						35			40				45			
Lys	Ser	Arg	Ser	Arg	Ser	Glu	Ser	Arg	Ser	Arg	Ser	Arg	Arg	Ser	Ser	
						50			55				60			
Arg	Arg	His	Tyr	Thr	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Arg	Arg	
						65			70				75			80
Ser	Arg	Ser	Arg	Ser	Tyr	Ser	Arg	Asp	Tyr	Arg	Arg	Arg	His	Ser	His	
						85			90				95			
Ser	His	Ser	Pro	Met	Ser	Thr	Arg	Arg	Arg	His	Val	Gly	Asn	Arg	Ala	
						100			105				110			
Asn	Pro	Asp	Pro	Asn	Cys	Cys	Leu	Gly	Val	Phe	Gly	Leu	Ser	Leu	Tyr	
						115			120				125			
Thr	Thr	Glu	Arg	Asp	Leu	Arg	Glu	Val	Phe	Ser	Lys	Tyr	Gly	Pro	Ile	
						130			135				140			
Ala	Asp	Val	Ser	Ile	Val	Tyr	Asp	Gln	Gln	Ser	Arg	Arg	Ser	Arg	Gly	
						145			150				155			160
Phe	Ala	Phe	Val	Tyr	Phe	Glu	Asn	Val	Asp	Asp	Ala	Lys	Glu	Ala	Lys	
						165			170				175			
Glu	Arg	Ala	Asn	Gly	Met	Glu	Leu	Asp	Gly	Arg	Arg	Ile	Arg	Val	Asp	
						180			185				190			
Phe	Ser	Ile	Thr	Lys	Arg	Pro	His	Thr	Pro	Thr	Pro	Gly	Ile	Tyr	Met	
						195			200				205			
Gly	Arg	Pro	Thr	Tyr	Gly	Ser	Ser	Arg	Arg	Arg	Asp	Tyr	Tyr	Asp	Arg	
						210			215				220			
Gly	Tyr	Asp	Arg	Gly	Tyr	Asp	Asp	Arg	Asp	Tyr	Tyr	Ser	Arg	Ser	Tyr	
						225			230				235			240
Arg	Gly	Trp	Arg	Ala	Ala	Gln	Asp	Arg								
						245			250				255			
Asp	Gln	Ile	Tyr	Arg	Arg	Arg	Ser	Pro	Ser	Pro	Tyr	Tyr	Ser	Arg	Gly	
						260			265				270			
Gly	Tyr	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Tyr	Ser	Pro	Arg	Arg	Tyr	
						275			280				285			

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<210> 34
<211> 904
<212> DNA
<213> homo sapiens

<400> 34

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gtcatggaga	caggtgcct	cgttgacaca	ataaaccgac	gttagccag	accattgccc	180
tcttgaacat	ttaccgttaac	cctcaaaact	cttcccgatc	tgctgacggt	ttgcgtgtg	240
ccgtgagcga	tgtggagatg	cagaacact	atgatgagtt	ttttgaggag	gttttacag	300
aatatggagga	gaagtatggg	gaagtagagg	agatgaacgt	ctgtgacaac	ctggagacc	360
acctgggtgg	gaacgtgtac	gtcaagttc	gccgtgagga	agatgcggaa	aaggctgtga	420
ttgacttcaa	taaccgttgg	tttaatggac	agccgatcca	cgccgagctg	tcacccgtga	480
cggacttcag	agaagcctgc	tgccgtcagt	atgagatggg	agaatgcaca	cgaggcggct	540
tctgcaactt	catgcattt	aagccattt	ccagagagct	gcggcgggag	ctgtatggcc	600
gccgtcgcaa	gaagcataga	tcaagatccc	gatccccgg	gcgtcggtt	cggcttagag	660
accgtggctg	tggcgggtgc	ggttggcggtg	gtggaggtgg	cgccggacgg	gagcgtgaca	720
ggaggcggctc	gagagatctg	gaaagatctg	ggcgttctg	agccatgcct	tttttacctt	780
atgtctgtcta	gaaagtgttg	tagtggattt	accaaaccag	ttcataaggg	gaattttta	840
aaaaaacaaca	aaaaaaaaaac	atacaaagat	gggtttctga	ataaaaattt	gtagtataa	900
						904

<210> 35
<211> 240
<212> PRT
<213> homo sapiens

<400> 35

Met	Ala	Glu	Tyr	Leu	Ala	Ser	Ile	Phe	Gly	Thr	Glu	Lys	Asp	Lys	Val
1															
															15
Asn	Cys	Ser	Phe	Tyr	Phe	Lys	Ile	Gly	Ala	Cys	Arg	His	Gly	Asp	Arg
															30
Cys	Ser	Arg	Leu	His	Asn	Lys	Pro	Thr	Phe	Ser	Gln	Thr	Ile	Ala	Leu
															45
Leu	Asn	Ile	Tyr	Arg	Asn	Pro	Gln	Asn	Ser	Ser	Gln	Ser	Ala	Asp	Gly
															60
Leu	Arg	Cys	Ala	Val	Ser	Asp	Val	Glu	Met	Gln	Glu	His	Tyr	Asp	Glu
															80
Phe	Phe	Glu	Glu	Val	Phe	Thr	Glu	Met	Glu	Glu	Lys	Tyr	Gly	Glu	Val
															95
Glu	Glu	Met	Asn	Val	Cys	Asp	Asn	Leu	Gly	Asp	His	Leu	Val	Gly	Asn
															110
Val	Tyr	Val	Lys	Phe	Arg	Arg	Glu	Glu	Asp	Ala	Glu	Lys	Ala	Val	Ile
															125
Asp	Leu	Asn	Asn	Arg	Trp	Phe	Asn	Gly	Gln	Pro	Ile	His	Ala	Glu	Leu
															140
Ser	Pro	Val	Thr	Asp	Phe	Arg	Glu	Ala	Cys	Cys	Arg	Gln	Tyr	Glu	Met
															160
Gly	Glu	Cys	Thr	Arg	Gly	Gly	Phe	Cys	Asn	Phe	Met	His	Leu	Lys	Pro
															175
Ile	Ser	Arg	Glu	Leu	Arg	Arg	Glu	Leu	Tyr	Gly	Arg	Arg	Lys	Lys	
															190
His	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Glu	Arg	Arg	Ser	Arg	Asp		
															205
Arg	Gly	Arg	Gly	Arg											
															220
Glu	Arg	Asp	Arg	Arg	Arg	Ser	Arg	Asp	Arg	Glu	Arg	Ser	Gly	Arg	Phe
															240
225															

<210> 36
<211> 2090
<212> DNA
<213> homo sapiens

<400> 36
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gtgcagcttc	cctcggccgc	cgggggcctc	cccgcgcctc	gccggccctcc	aggccctc	180
tggctggcga	gcgggcgcga	catctggcc	gcacatctgc	gctgcccggg	cggcgcgggg	240
tccggagagg	gcccggcgcg	gagcgcagcc	aggggtccgg	gaaggcgcgg	tccgtgcgt	300
gggggctcgg	tctatgacga	gcagcgggggt	ctgcatggg	tcgggggctg	ctcaggggcc	360
tgtggccgct	gcacatcgctc	ctgtggacgc	gtatcgccag	cacgatccca	ccgcacgttc	420
agaagtcggt	taataacgac	atgatagtca	ctgacaacaa	cggtgcagtc	aagtttccac	480
aactgtgtaa	attttgttat	gtgagatttt	ccacctgtga	caaccagaaa	tcctgcatga	540
gcaactgcag	catcacctcc	atctgtgaga	agccacagga	agtctgtgt	gctgtatgga	600
gaaagaatga	cgagaacata	acactagaga	cagttgcca	tgaccccaag	ctcccctacc	660
atgactttat	tcttggaaat	gctgtcttc	caaagtgcat	tatgaaggaa	aaaaaaaagc	720
ctggtagac	ttttttcatg	tgttccgtat	gctctgtat	gtgcaatgac	aacatcatct	780
tctcagaaga	atataaacacc	agcaatctgt	acttggatgt	agtcatattt	caagtgcacag	840
gcatcagcct	cctgccccca	ctggggatgt	ccatatctgt	catcatcatc	ttctactgct	900
accgcgttaa	ccggcagcag	aagctgagtt	caacctggga	aaccggcaag	acgcggaaagc	960
tcatggagtt	cagcgagcac	tgtgcatca	tcctggaaga	tgaccgcct	gacatcagct	1020
ccacgtgtgc	caacaacatc	aaccacaaca	cagagctgt	gcccatttag	ctggacaccc	1080
tgggtgggaa	aggctgcctt	gctgagggtct	ataaggccaa	gctgaagcag	aacacttcag	1140
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acgacctaacc	ctgctgcctg	tgtgactttt	ggctttccct	gcgtctggac	cctactctgt	1560
ctgtggatga	cctggctaac	agtgggcagg	tgggaactgc	agatacatg	gctccagaag	1620
tcctagaatc	caggatgaat	ttggagaatg	ctgagtcctt	caagcagacc	gatgtctact	1680
ccatggctct	ggtgctctgg	gaaatgacat	ctcgctgtaa	tgcagtggga	gaagtaaaag	1740
attatgagcc	tccattttgt	tccaagggtc	gggagacccc	ctgtgtcga	agcatgaagg	1800
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gcatccagat	ggtgtgtgag	acgttgactg	agtgtggga	ccacgaccca	gaggccgc	1920
tcacagccca	gtgtgtggca	gaacgcttca	gtgagctgg	gcatctggac	aggctctcg	1980
ggaggagctg	ctcgaggag	aagattctgt	aagacggctc	cctaaacact	accaaatacg	2040
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<210> 37

<211> 567

<212> PRT

<213> homo sapiens

<400> 37

Met	Gly	Arg	Gly	L	E	U	A	R	G	L	Y	L	E	T	R	P	R	P	L	U	R	P	H	I	S	I	L	E	V	A	L	U					
1				5				10											15																		
Trp	Thr	Arg	Ile	Ala	Ser	Thr	Ile	Pro	Pro	Pro	His	Val	Gln	Lys	Ser	Val																					
							20						25																								
Asn	Asn	Asp	Met	Ile	Val	Thr	Asp	Asn	Asn	Gly	Ala	Val	Lys	Phe	Pro																						
							35				40		45																								
Gln	Leu	Cys	Lys	Phe	Cys	Asp	Val	Arg	Phe	Ser	Thr	Cys	Asp	Asn	Gln																						
							50			55		60																									
Lys	Ser	Cys	Met	Ser	Asn	Cys	Ser	Ile	Thr	Ser	Ile	Cys	Glu	Lys	Pro																						
							65			70		75		80																							
Gln	Glu	Val	Cys	Val	Ala	Val	Trp	Arg	Lys	Asn	Asp	Glu	Asn	Ile	Thr																						
							85			90		95																									
Leu	Glu	Thr	Val	Cys	His	Asp	Pro	Lys	Leu	Pro	Tyr	His	Asp	Phe	Ile																						
							100			105		110																									
Leu	Glu	Asp	Ala	Ala	Ser	Pro	Lys	Cys	Ile	Met	Lys	Glu	Lys	Lys	Lys																						
							115			120		125																									
Pro	Gly	Glu	Thr	Phe	Phe	Met	Cys	Ser	Cys	Ser	Ser	Asp	Glu	Cys	Asn																						
							130			135		140																									
Asp	Asn	Ile	Ile	Phe	Ser	Glu	Glu	Tyr	Asn	Thr	Ser	Asn	Pro	Asp	Leu																						
							145			150		155																									
Leu	Leu	Val	Ile	Phe	Gln	Val	Thr	Gly	Ile	Ser	Leu	Leu	Pro	Pro	Leu																						
							165			170		175																									
Gly	Val	Ala	Ile	Ser	Val	Ile	Ile	Ile	Phe	Tyr	Cys	Tyr	Arg	Val	Asn																						
							180			185		190																									
Arg	Gln	Gln	Lys	Leu	Ser	Ser	Thr	Trp	Glu	Thr	Gly	Lys	Thr	Arg	Lys																						
							195			200		205																									
Leu	Met	Glu	Phe	Ser	Glu	His	Cys	Ala	Ile	Ile	Leu	Glu	Asp	Asp	Arg																						

33178SEQLIST.TXT

210	215	220
Ser Asp Ile Ser Ser Thr Cys Ala Asn Asn Ile Asn His Asn Thr Glu		
225	230	235
Leu Leu Pro Ile Glu Leu Asp Thr Leu Val Gly Lys Gly Arg Phe Ala		240
245	250	255
Glu Val Tyr Lys Ala Lys Leu Lys Gln Asn Thr Ser Glu Gln Phe Glu		
260	265	270
Thr Val Ala Val Lys Ile Phe Pro Tyr Glu Glu Tyr Ala Ser Trp Lys		
275	280	285
Thr Glu Lys Asp Ile Phe Ser Asp Ile Asn Leu Lys His Glu Asn Ile		
290	295	300
Leu Gln Phe Leu Thr Ala Glu Glu Arg Lys Thr Glu Leu Gly Lys Gln		
305	310	315
Tyr Trp Leu Ile Thr Ala Phe His Ala Lys Gly Asn Leu Gln Glu Tyr		
325	330	335
Leu Thr Arg His Val Ile Ser Trp Glu Asp Leu Arg Lys Leu Gly Ser		
340	345	350
Ser Leu Ala Arg Gly Ile Ala His Leu His Ser Asp His Thr Pro Cys		
355	360	365
Gly Arg Pro Lys Met Pro Ile Val His Arg Asp Leu Lys Ser Ser Asn		
370	375	380
Ile Leu Val Lys Asn Asp Leu Thr Cys Cys Leu Cys Asp Phe Gly Leu		
385	390	395
Ser Leu Arg Leu Asp Pro Thr Leu Ser Val Asp Asp Leu Ala Asn Ser		
405	410	415
Gly Gln Val Gly Thr Ala Arg Tyr Met Ala Pro Glu Val Leu Glu Ser		
420	425	430
Arg Met Asn Leu Glu Asn Ala Glu Ser Phe Lys Gln Thr Asp Val Tyr		
435	440	445
Ser Met Ala Leu Val Leu Trp Glu Met Thr Ser Arg Cys Asn Ala Val		
450	455	460
Gly Glu Val Lys Asp Tyr Glu Pro Pro Phe Gly Ser Lys Val Arg Glu		
465	470	475
His Pro Cys Val Glu Ser Met Lys Asp Asn Val Leu Arg Asp Arg Gly		
485	490	495
Arg Pro Glu Ile Pro Ser Phe Trp Leu Asn His Gln Gly Ile Gln Met		
500	505	510
Val Cys Glu Thr Leu Thr Glu Cys Trp Asp His Asp Pro Glu Ala Arg		
515	520	525
Leu Thr Ala Gln Cys Val Ala Glu Arg Phe Ser Glu Leu Glu His Leu		
530	535	540
Asp Arg Leu Ser Gly Arg Ser Cys Ser Glu Glu Lys Ile Pro Glu Asp		
545	550	555
Gly Ser Leu Asn Thr Thr Lys		
565		

<210> 38

<211> 1725

<212> DNA

<213> homo sapiens

<400> 38

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tgagacttga	taatagctcc	tctggtgcaa	gtgtggtagc	tattgacaac	aaaatcgagc	360
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tcaaagagca	aatcaaagaa	ctaatacgaga	aaaattccca	gctggagcag	gagaacaatc	480
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gctccccccc	tgccaccacc	caggcacagg	gcaccacaca	gccccccgcc	cagccagcat	600
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gagaattagc	atggatatac	cgggacctca	tgcagcttgg	cagatatctg	agaaatggtt	900

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<210> 39
 <211> 144
 <212> PRT
 <213> homo sapiens

<400> 39
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 20 25 30
 Glu Asn Ala Ser Val Arg Leu Asp Asn Ser Ser Ser Gly Ala Ser Val
 35 40 45
 Val Ala Ile Asp Asn Lys Ile Glu Gln Ala Met Asp Leu Val Lys Ser
 50 55 60
 His Leu Met Tyr Ala Val Arg Glu Glu Val Glu Val Leu Lys Glu Gln
 65 70 75 80
 Ile Lys Glu Leu Ile Glu Lys Asn Ser Gln Leu Glu Gln Glu Asn Asn
 85 90 95
 Leu Leu Lys Thr Leu Ala Ser Pro Glu Gln Leu Ala Gln Phe Gln Ala
 100 105 110
 Gln Leu Gln Thr Gly Ser Pro Pro Ala Thr Thr Gln Pro Gln Gly Thr
 115 120 125
 Thr Gln Pro Pro Ala Gln Pro Ala Ser Gln Gly Ser Gly Pro Thr Ala
 130 135 140

<210> 40
 <211> 1693
 <212> DNA
 <213> homo sapiens

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 caaaagagct ttcctctatc aactggggat gattacagtt cttcctaaaaa aagcctactt 180
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 cagaaaaatga aatggaggag atatttcattt aaatactcca gactatgcctt ggaatagcta 900
 cattctcatc taggccacaa gctgttcaag gaggaaaaagc ttaatgtt gttcttcgtt 960
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 aaagcagtgc agttcttagc caaggtaag tactgcaact gtcgagagca tcttgccttc 1200
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 gaatcaatac tcc 1693

<210> 41
 <211> 278
 <212> PRT
 <213> homo sapiens

<400> 41
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 Glu Asn Ser Cys Ile Arg Cys Phe Gly Lys His Ile Leu Gln Lys Thr
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 Ala Pro Ala Gln Leu Ser Pro Ile Ala Ser Ala Pro Arg Leu Ser Phe
 35 40 45
 Leu Ile His Ala Lys Ala Phe Ser Thr Ala Glu Asp Thr Gln Asn Glu
 50 55 60
 Gly Lys Lys Thr Lys Lys Asn Lys Thr Ala Phe Ser Asn Val Gly Arg
 65 70 75 80
 Lys Ile Ser Gln Arg Val Ile His Leu Phe Asp Glu Lys Gly Asn Asp
 85 90 95
 Leu Gly Asn Met His Arg Ala Asn Val Ile Arg Leu Met Asp Glu Arg
 100 105 110
 Asp Leu Arg Leu Val Gln Arg Asn Thr Ser Thr Glu Pro Ala Glu Tyr
 115 120 125
 Gln Leu Met Thr Gly Leu Gln Ile Leu Gln Glu Arg Gln Arg Leu Arg
 130 135 140
 Glu Met Glu Lys Ala Asn Pro Lys Thr Gly Pro Thr Leu Arg Lys Glu
 145 150 155 160
 Leu Ile Leu Ser Ser Asn Ile Gly Gln His Asp Leu Asp Thr Lys Thr
 165 170 175
 Lys Gln Ile Gln Gln Trp Ile Lys Lys His Leu Val Gln Ile Thr
 180 185 190
 Ile Lys Lys Gly Lys Asn Val Asp Val Ser Glu Asn Glu Met Glu Glu
 195 200 205
 Ile Phe His Gln Ile Leu Gln Thr Met Pro Gly Ile Ala Thr Phe Ser
 210 215 220
 Ser Arg Pro Gln Ala Val Gln Gly Lys Ala Leu Met Cys Val Leu
 225 230 235 240
 Arg Ala Leu Ser Lys Asn Glu Glu Lys Ala Tyr Lys Glu Thr Gln Glu
 245 250 255
 Thr Gln Glu Arg Asp Thr Leu Asn Lys Asp His Gly Asn Asp Lys Glu
 260 265 270
 Ser Asn Val Leu His Gln
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<210> 42
 <211> 1776
 <212> DNA
 <213> homo sapiens

<400> 42
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 gtacgcagca aaaatcatca ataccagaagaa gttgtctgcc cgggatcacc agaaaactaga 180
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 ccttagccatc gaagtacagg gagagcagca ggcttggttt gttttgtcg gcacccagg 540

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<210> 43

<211> 518

<212> PRT

<213> homo sapiens

<400> 43

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 Lys Lys Thr Ser Thr Gln Glu Tyr Ala Ala Lys Ile Ile Asn Thr Lys
 35 40 45
 Lys Leu Ser Ala Arg Asp His Gln Lys Leu Glu Arg Glu Ala Arg Ile
 50 55 60
 Cys Arg Leu Leu Lys His Pro Asn Ile Val Arg Leu His Asp Ser Ile
 65 70 75 80
 Ser Glu Glu Gly Phe His Tyr Leu Val Phe Asp Leu Val Thr Gly Gly
 85 90 95
 Glu Leu Phe Glu Asp Ile Val Ala Arg Glu Tyr Tyr Ser Glu Ala Asp
 100 105 110
 Ala Ser His Ile His Gln Ile Leu Glu Ser Val Asn His Ile His
 115 120 125
 Gln His Asp Ile Val His Arg Asp Leu Lys Pro Glu Asn Leu Leu Leu
 130 135 140
 Ala Ser Lys Cys Lys Gly Ala Ala Val Lys Leu Ala Asp Phe Gly Leu
 145 150 155 160
 Ala Ile Glu Val Gln Gly Glu Gln Gln Ala Trp Phe Gly Phe Ala Gly
 165 170 175
 Thr Pro Gly Tyr Leu Ser Pro Glu Val Leu Arg Lys Asp Pro Tyr Gly
 180 185 190
 Lys Pro Val Asp Ile Trp Ala Cys Gly Val Ile Leu Tyr Ile Leu Leu
 195 200 205
 Val Gly Tyr Pro Pro Phe Trp Asp Glu Asp Gln His Lys Leu Tyr Gln
 210 215 220
 Gln Ile Lys Ala Gly Ala Tyr Asp Phe Pro Ser Pro Glu Trp Asp Thr
 225 230 235 240
 Val Thr Pro Glu Ala Lys Asn Leu Ile Asn Gln Met Leu Thr Ile Asn
 245 250 255
 Pro Ala Lys Arg Ile Thr Ala Asp Gln Ala Leu Lys His Pro Trp Val
 260 265 270
 Cys Gln Arg Ser Thr Val Ala Ser Met Met His Arg Gln Glu Thr Val
 275 280 285
 Glu Cys Leu Arg Lys Phe Asn Ala Arg Arg Lys Leu Lys Gly Ala Ile
 290 295 300
 Leu Thr Thr Met Leu Val Ser Arg Asn Phe Ser Ala Ala Lys Ser Leu
 305 310 315 320

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Leu	Asn	Lys	Lys	Ser	Asp	Gly	Gly	Val	Lys	Pro	Gln	Ser	Asn	Asn	Lys
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Asn	Ser	Leu	Val	Ser	Pro	Ala	Gln	Glu	Pro	Ala	Pro	Leu	Gln	Thr	Ala
					340			345							350
Met	Glu	Pro	Gln	Thr	Thr	Val	Val	His	Asn	Ala	Thr	Asp	Gly	Ile	Lys
					355			360							365
Gly	Ser	Thr	Glu	Ser	Cys	Asn	Thr	Thr	Glu	Asp	Glu	Asp	Leu	Lys	
					370		375								380
Val	Arg	Lys	Gln	Glu	Ile	Ile	Lys	Ile	Thr	Glu	Gln	Leu	Ile	Glu	Ala
					385		390		395						400
Ile	Asn	Asn	Gly	Asp	Phe	Glu	Ala	Tyr	Thr	Lys	Ile	Cys	Asp	Pro	Gly
					405			410							415
Leu	Thr	Ser	Phe	Glu	Pro	Glu	Ala	Leu	Gly	Asn	Leu	Val	Glu	Gly	Met
					420			425							430
Asp	Phe	His	Lys	Phe	Tyr	Phe	Glu	Asn	Leu	Leu	Ser	Lys	Asn	Ser	Lys
					435		440								445
Pro	Ile	His	Thr	Thr	Ile	Leu	Asn	Pro	His	Val	His	Val	Ile	Gly	Glu
					450		455								460
Asp	Ala	Ala	Cys	Ile	Ala	Tyr	Ile	Arg	Leu	Thr	Gln	Tyr	Ile	Asp	Gly
					465		470			475					480
Gln	Gly	Arg	Pro	Arg	Thr	Ser	Gln	Ser	Glu	Glu	Thr	Arg	val	Trp	His
					485			490							495
Arg	Arg	Asp	Gly	Lys	Trp	Leu	Asn	Val	His	Tyr	His	Cys	Ser	Gly	Ala
					500			505							510
Pro	Ala	Ala	Pro	Leu	Gln										
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<210> 44
<211> 1377
<212> DNA
<213> homo sapiens

<400> 44

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<210> 45
<211> 387
<212> PRT
<213> homo sapiens

<400> 45

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Tyr	Glu	Asn	Tyr	Glu	Pro	Lys	Glu	Ile	Leu	Gly	Arg	Gly	Val	Ser	Ser
					20			25					30		

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 65 70 75 80
 Val Ser Gly His Pro Asn Ile Ile Gln Leu Lys Asp Thr Tyr Glu Thr
 85 90 95
 Asn Thr Phe Phe Leu Val Phe Asp Leu Met Lys Arg Gly Glu Leu
 100 105 110
 Phe Asp Tyr Leu Thr Glu Lys Val Thr Leu Ser Glu Lys Glu Thr Arg
 115 120 125
 Lys Ile Met Arg Ala Leu Leu Glu Val Ile Cys Thr Leu His Lys Leu
 130 135 140
 Asn Ile Val His Arg Asp Leu Lys Pro Glu Asn Ile Leu Leu Asp Asp
 145 150 155 160
 Asn Met Asn Ile Lys Leu Thr Asp Phe Gly Phe Ser Cys Gln Leu Glu
 165 170 175
 Pro Gly Glu Arg Leu Arg Glu Val Cys Gly Thr Pro Ser Tyr Leu Ala
 180 185 190
 Pro Glu Ile Ile Glu Cys Ser Met Asn Glu Asp His Pro Gly Tyr Gly
 195 200 205
 Lys Glu Val Asp Met Trp Ser Thr Gly Val Ile Met Tyr Thr Leu Leu
 210 215 220
 Ala Gly Ser Pro Pro Phe Trp His Arg Lys Gln Met Leu Met Leu Arg
 225 230 235 240
 Met Ile Met Ser Gly Asn Tyr Gln Phe Gly Ser Pro Glu Trp Asp Asp
 245 250 255
 Tyr Ser Asp Thr Val Lys Asp Leu Val Ser Arg Phe Leu Val Val Gln
 260 265 270
 Pro Gln Asn Arg Tyr Thr Ala Glu Glu Ala Leu Ala His Pro Phe Phe
 275 280 285
 Gln Gln Tyr Leu Val Glu Glu Val Arg His Phe Ser Pro Arg Gly Lys
 290 295 300
 Phe Lys Val Ile Ala Leu Thr Val Leu Ala Ser Val Arg Ile Tyr Tyr
 305 310 315 320
 Gln Tyr Arg Arg Val Lys Pro Val Thr Arg Glu Ile Val Ile Arg Asp
 325 330 335
 Pro Tyr Ala Leu Arg Pro Leu Arg Arg Leu Ile Asp Ala Tyr Ala Phe
 340 345 350
 Arg Ile Tyr Gly His Trp Val Lys Lys Gly Gln Gln Gln Asn Arg Ala
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 Ala Leu Phe Glu Asn Thr Pro Lys Ala Val Leu Leu Ser Leu Ala Glu
 370 375 380
 Glu Asp Tyr
 385

<210> 46
 <211> 2360
 <212> DNA
 <213> homo sapiens

<400> 46

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cgcggcgtc	tggtgccagc	gcccagtggc	cggccgttcg	aaagtgactg	gtgcctcgcc	240
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<212> PRT

<213> homo sapiens

<400> 47

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<211> 4119

<212> DNA

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50 55 60
Gln Glu Asp Lys Pro Ala Cys Val Cys His Ser Gly Tyr Val Gly Ala
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Arg Cys Glu His Ala Asp Leu Leu Ala Val Val Ala Ala Ser Gln Lys
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Lys Gln Ala Ile Thr Ala Leu Val Val Ser Ile Val Ala Leu Ala
100 105 110
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 50 55 60
 Asp Asp Asp Asp Asp Tyr Ser Ser Ser Thr Ser Leu Leu Gly Gln Lys
 65 70 75 80
 Lys Pro Gly Tyr His Ala Pro Val Ala Leu Leu Asn Asp Ile Pro Gln
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 Ser Thr Glu Gln Tyr Asp Pro Phe Ala Glu His Arg Pro Pro Lys Ile
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 Ala Asp Arg Glu Asp Glu Tyr Lys Lys His Arg Arg Thr Met Ile Ile
 115 120 125
 Ser Pro Glu Arg Leu Asp Pro Phe Ala Asp Gly Gly Lys Thr Pro Asp
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Gly His Thr Pro Ser Leu Arg Trp Asp Glu Thr Pro Gly Arg Ala Lys	225	230	240
Gly Ser Glu Thr Pro Gly Ala Thr Pro Gly Ser Lys Ile Trp Asp Pro	245	250	255
Thr Pro Ser His Thr Pro Ala Gly Ala Ala Thr Pro Gly Arg Gly Asp	260	265	270
Thr Pro Gly His Ala Thr Pro Gly His Gly Gly Ala Thr Ser Ser Ala	275	280	285
Arg Lys Asn Arg Trp Asp Glu Thr Pro Lys Thr Glu Arg Asp Thr Pro	290	295	300
Gly His Gly Ser Gly Trp Ala Glu Thr Pro Arg Thr Asp Arg Gly Gly	305	310	315
Asp Ser Ile Gly Glu Thr Pro Thr Pro Gly Ala Ser Lys Arg Lys Ser	325	330	335
Arg Trp Asp Glu Thr Pro Ala Ser Gln Met Gly Gly Ser Thr Pro Val	340	345	350
Leu Thr Pro Gly Lys Thr Pro Ile Gly Thr Pro Ala Met Asn Met Ala	355	360	365
Thr Pro Thr Pro Gly His Ile Met Ser Met Thr Pro Glu Gln Leu Gln	370	375	380
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Asp Glu Glu Leu Asp Ala Met Phe Pro Glu Gly Tyr Lys Val Leu Pro	405	410	415
Pro Pro Ala Gly Tyr Val Pro Ile Arg Thr Pro Ala Arg Lys Leu Thr	420	425	430
Ala Thr Pro Thr Pro Leu Gly Gly Met Thr Gly Phe His Met Gln Thr	435	440	445
Glu Asp Arg Thr Met Lys Ser Val Asn Asp Gln Pro Ser Gly Asn Leu	450	455	460
Pro Phe Leu Lys Pro Asp Asp Ile Gln Tyr Phe Asp Lys Leu Leu Val	465	470	475
Asp Val Asp Glu Ser Thr Leu Ser Pro Glu Glu Gln Lys Glu Arg Lys	485	490	495
Ile Met Lys Leu Leu Leu Lys Ile Lys Asn Gly Thr Pro Pro Met Arg	500	505	510
Lys Ala Ala Leu Arg Gln Ile Thr Asp Lys Ala Arg Glu Phe Gly Ala	515	520	525
Gly Pro Leu Phe Asn Gln Ile Leu Pro Leu Leu Met Ser Pro Thr Leu	530	535	540
Glu Asp Gln Glu Arg His Leu Leu Val Lys Val Ile Asp Arg Ile Leu	545	550	555
Tyr Lys Leu Asp Asp Leu Val Arg Pro Tyr Val His Lys Ile Leu Val	565	570	575
Val Ile Glu Pro Leu Leu Ile Asp Glu Asp Tyr Tyr Ala Arg Val Glu	580	585	590
Gly Leu Glu Ile Ile Ser Asn Leu Ala Lys Ala Ala Gly Leu Ala Thr	595	600	605
Met Ile Ser Thr Met Arg Pro Asp Ile Asp Asn Met Asp Glu Tyr Val	610	615	620
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Ser Trp Gln Ala Arg His Thr Gly Ile Lys Ile Val Gln Gln Ile Ala	660	665	670
Ile Leu Met Gly Cys Ala Ile Leu Pro His Leu Arg Ser Leu Val Glu	675	680	685
Ile Ile Glu His Gly Leu Val Asp Glu Gln Gln Lys Val Arg Thr Ile	690	695	700
Ser Ala Leu Ala Ile Ala Ala Leu Ala Glu Ala Ala Thr Pro Tyr Gly	705	710	715
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<212> DNA
<213> homo sapiens

<400> 52

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<213> homo sapiens

<400> 53

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Phe Gly Trp Glu Lys Pro His Ile Lys Pro Leu Gln Asn Leu Ser Leu

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Pro Thr Lys Ala Leu Leu Phe Val Leu Leu Ser Pro Val Gly Pro Tyr			
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Val Gly Thr Met Asn Leu Phe Leu Tyr Trp Ile Asn Glu Asp Gly Glu			
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<211> 2323
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<213> homo sapiens

<400> 54

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 <213> homo sapiens

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 Lys Tyr Ser Glu Val Phe Glu Ala Ile Asn Ile Thr Asn Asn Glu Lys
 50 55 60
 Val Val Val Lys Ile Leu Lys Pro Val Lys Lys Lys Ile Lys Arg
 65 70 75 80
 Glu Ile Lys Ile Leu Glu Asn Leu Arg Gly Gly Pro Asn Ile Ile Thr
 85 90 95
 Leu Ala Asp Ile Val Lys Asp Pro Val Ser Arg Thr Pro Ala Leu Val
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 Phe Glu His Val Asn Asn Thr Asp Phe Lys Gln Leu Tyr Gln Thr Leu
 115 120 125
 Thr Asp Tyr Asp Ile Arg Phe Tyr Met Tyr Glu Ile Leu Lys Ala Leu
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 Asp Tyr Cys His Ser Met Gly Ile Met His Arg Asp Val Lys Pro His
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 Asn Val Met Ile Asp His Glu His Arg Lys Leu Arg Leu Ile Asp Trp
 165 170 175
 Gly Leu Ala Glu Phe Tyr His Pro Gly Gln Glu Tyr Asn Val Arg Val
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 Ala Ser Arg Tyr Phe Lys Gly Pro Glu Leu Leu Val Asp Tyr Gln Met
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 Tyr Asp Tyr Ser Leu Asp Met Trp Ser Leu Gly Cys Met Leu Ala Ser
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<213> homo sapiens

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 <213> homo sapiens

<400> 59

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 35 40 45
 Ala Pro Pro Gly Lys Arg Thr Val Gly Asp Gln Met Lys Lys Asn Gln
 50 55 60
 Ala Ala Asp Asp Asp Glu Asp Leu Asn Asp Thr Asn Tyr Asp Glu
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 Phe Asn Gly Tyr Ala Gly Ser Leu Phe Ser Ser Gly Pro Tyr Glu Lys
 85 90 95
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 100 105 110
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 115 120 125
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 Pro Glu Val Gly Asp Ala Arg Asn Lys Arg Gln Arg Asn Pro Arg Tyr
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 Glu Lys Leu Thr Pro Val Pro Asp Ser Phe Phe Ala Lys His Leu Gln
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 Thr Gly Glu Asn His Thr Ser Val Asp Pro Arg Gln Thr Gln Phe Gly
 195 200 205
 Gly Leu Asn Thr Pro Tyr Pro Gly Gly Leu Asn Thr Pro Tyr Pro Gly
 210 215 220
 Gly Met Thr Pro Gly Leu Met Thr Pro Gly Thr Gly Glu Leu Asp Met
 225 230 235 240
 Arg Lys Ile Gly Gln Ala Arg Asn Thr Leu Met Asp Met Arg Leu Ser
 245 250 255
 Gln Val Ser Asp Ser Val Ser Gly Gln Thr Val Val Asp Pro Lys Gly
 260 265 270
 Tyr Leu Thr Asp Leu Asn Ser Met Ile Pro Thr His Gly Gly Asp Ile
 275 280 285
 Asn Asp Ile Lys Lys Ala Arg Leu Leu Leu Lys Ser Val Arg Glu Thr
 290 295 300
 Asn Pro His His Pro Pro Ala Trp Ile Ala Ser Ala Arg Leu Glu Glu
 305 310 315 320
 Val Thr Gly Lys Leu Gln Val Ala Arg Asn Leu Ile Met Lys Gly Thr
 325 330 335
 Glu Met Cys Pro Lys Ser Glu Asp Val Trp Leu Glu Ala Ala Arg Leu
 340 345 350
 Gln Pro Gly Asp Thr Ala Lys Ala Val Val Ala Gln Ala Val Arg His
 355 360 365
 Leu Pro Gln Ser Val Arg Ile Tyr Ile Arg Ala Ala Glu Leu Glu Thr
 370 375 380
 Asp Ile Arg Ala Lys Lys Arg Val Leu Arg Lys Ala Leu Glu His Val
 385 390 395 400
 Pro Asn Ser Val Arg Leu Trp Lys Ala Ala Val Glu Leu Glu Glu Pro
 405 410 415
 Glu Asp Ala Arg Ile Met Leu Ser Arg Ala Val Glu Cys Cys Pro Thr
 420 425 430
 Ser Val Glu Leu Trp Leu Ala Leu Ala Arg Leu Glu Thr Tyr Glu Asn
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 Ala Arg Lys Val Leu Asn Lys Ala Arg Glu Asn Ile Pro Thr Asp Arg
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His Ile Trp Ile Thr Ala Ala Lys Leu Glu Glu Ala Asn Gly Asn Thr
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 Gln Met Val Glu Lys Ile Ile Asp Arg Ala Ile Thr Ser Leu Arg Ala
 485 490 495
 Asn Gly Val Glu Ile Asn Arg Glu Gln Trp Ile Gln Asp Ala Glu Glu
 500 505 510
 Cys Asp Arg Ala Gly Ser Val Ala Thr Cys Gln Ala Val Met Arg Ala
 515 520 525
 Val Ile Gly Ile Gly Ile Glu Glu Glu Asp Arg Lys His Thr Trp Met
 530 535 540
 Glu Asp Ala Asp Ser Cys Val Ala His Asn Ala Leu Glu Cys Ala Arg
 545 550 555 560
 Ala Ile Tyr Ala Tyr Ala Leu Gln Val Phe Pro Ser Lys Lys Ser Val
 565 570 575
 Trp Leu Arg Ala Ala Tyr Phe Glu Lys Asn His Gly Thr Arg Glu Ser
 580 585 590
 Leu Glu Ala Leu Leu Gln Arg Ala Val Ala His Cys Pro Lys Ala Glu
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 Val Leu Trp Leu Met Gly Ala Lys Ser Lys Trp Leu Ala Gly Asp Val
 610 615 620
 Pro Ala Ala Arg Ser Ile Leu Ala Leu Ala Phe Gln Ala Asn Pro Asn
 625 630 635 640
 Ser Glu Glu Ile Trp Leu Ala Ala Val Lys Leu Glu Ser Glu Asn Asp
 645 650 655
 Glu Tyr Glu Arg Ala Arg Arg Leu Leu Ala Lys Ala Arg Ser Ser Ala
 660 665 670
 Pro Thr Ala Arg Val Phe Met Lys Ser Val Lys Leu Glu Trp Val Gln
 675 680 685
 Asp Asn Ile Arg Ala Ala Gln Asp Leu Cys Glu Glu Ala Leu Arg His
 690 695 700
 Tyr Glu Asp Phe Pro Lys Leu Trp Met Met Lys Gly Gln Ile Glu Glu
 705 710 715 720
 Gln Lys Glu Met Met Glu Lys Ala Arg Glu Ala Tyr Asn Gln Gly Leu
 725 730 735
 Lys Lys Cys Pro His Ser Thr Pro Leu Trp Leu Leu Ser Arg Leu
 740 745 750
 Glu Glu Lys Ile Gly Gln Leu Thr Arg Ala Arg Ala Ile Leu Glu Lys
 755 760 765
 Ser Arg Leu Lys Asn Pro Lys Asn Pro Gly Leu Trp Leu Glu Ser Val
 770 775 780
 Arg Leu Glu Tyr Arg Ala Gly Leu Lys Asn Ile Ala Asn Thr Leu Met
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 Ala Lys Ala Leu Gln Glu Cys Pro Asn Ser Gly Ile Leu Trp Ser Glu
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 Ala Ile Phe Leu Glu Ala Arg Pro Gln Arg Arg Thr Lys Ser Val Asp
 820 825 830
 Ala Leu Lys Lys Cys Glu His Asp Pro His Val Leu Leu Ala Val Ala
 835 840 845
 Lys Leu Phe Trp Ser Gln Arg Lys Ile Thr Lys Ala Arg Glu Trp Phe
 850 855 860
 His Arg Thr Val Lys Ile Asp Ser Asp Leu Gly Asp Ala Trp Ala Phe
 865 870 875 880
 Phe Tyr Lys Phe Glu Leu Gln His Gly Thr Glu Glu Gln Gln Glu Glu
 885 890 895
 Val Arg Lys Arg Cys Glu Ser Ala Glu Pro Arg His Gly Glu Leu Trp
 900 905 910
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<211> 1287

<212> DNA

<213> homo sapiens

<400> 60

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ggctcgagag	gaccctgccc	cgctccggc	agagcctcg	cctgggcggc	gggtggcg	240
cggtcgcgt	tatggccact	gggctgggc	gctgaccgc	ggcttagaaa	ggcccgagg	300
cccgaaatctc	ggtggccgt	gctccagcg	ggcctgcgc	atggcctct	ccgcccgcctc	360
ctcgagcat	tgcagaagc	tgacgagat	cttccgcggc	ctccatgaag	acctacaagg	420
ggtgcccgg	cggtctgtt	ggacggcg	gaccgaagaa	aagaagaaat	tgatcaggga	480
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ccttgctaa	ctccatcg	gggtgagaag	cacaccc	acagccacac	ctggaggccg	660
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acgttctcat	cggttgc	cagagact	ccagattggc	tcagaaatca	tagaagagct	840
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gtaatgcat	gatgttagg	atgtggatag	aatagcata	ttgctgtgt	ggctgacag	1140
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<211> 232

<212> PRT

<213> homo sapiens

<400> 61

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Leu	Gly	Thr	Ala	Gly	Thr	Glu	Glu	Lys	Lys	Lys	Leu	Ile	Arg	Asp	Phe
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Asp	Glu	Lys	Gln	Gln	Glu	Ala	Asn	Glu	Thr	Leu	Ala	Glu	Met	Glu	Glu
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Glu	Leu	Arg	Tyr	Ala	Pro	Leu	Ser	Phe	Arg	Asn	Pro	Met	Met	Ser	Lys
				65				70				75			80
Leu	Arg	Asn	Tyr	Arg	Lys	Asp	Leu	Ala	Lys	Leu	His	Arg	Glu	Val	Arg
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Ser	Thr	Pro	Leu	Thr	Ala	Thr	Pro	Gly	Gly	Arg	Gly	Asp	Met	Lys	Tyr
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Gly	Ile	Tyr	Ala	Val	Glu	Asn	Glu	His	Met	Asn	Arg	Leu	Gln	Ser	Gln
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Arg	Ala	Met	Leu	Leu	Gln	Gly	Thr	Glu	Ser	Leu	Asn	Arg	Ala	Thr	Gln
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Ser	Ile	Glu	Arg	Ser	His	Arg	Ile	Ala	Thr	Glu	Thr	Asp	Gln	Ile	Gly
				145				150				155			160
Ser	Glu	Ile	Ile	Glu	Glu	Leu	Gly	Glu	Gln	Arg	Asp	Gln	Leu	Glu	Arg
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Thr	Lys	Ser	Arg	Leu	Val	Asn	Thr	Ser	Glu	Asn	Leu	Ser	Lys	Ser	Arg
				180				185				190			
Lys	Ile	Leu	Arg	Ser	Met	Ser	Arg	Lys	Val	Thr	Thr	Asn	Lys	Leu	Leu
				195				200				205			
Leu	Ser	Ile	Ile	Ile	Leu	Leu	Glu	Leu	Ala	Ile	Leu	Gly	Gly	Leu	Val
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<211> 1869

<212> DNA

<213> homo sapiens

<400> 62

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 35 40 45
 Lys Arg Gly Leu Asn Ser Ser Phe Glu Thr Ser Pro Lys Lys Val Lys
 50 55 60
 Trp Ser Ser Thr Val Thr Ser Pro Arg Leu Ser Leu Phe Ser Asp Gly
 65 70 75 80
 Asp Ser Ser Glu Ser Glu Asp Thr Leu Ser Ser Ser Glu Arg Ser Lys
 85 90 95
 Gly Ser Gly Ser Arg Pro Pro Thr Pro Lys Ser Ser Pro Gln Lys Thr
 100 105 110
 Arg Lys Ser Pro Gln Val Thr Arg Gly Ser Pro Gln Lys Thr Ser Cys
 115 120 125
 Ser Pro Gln Lys Thr Arg Gln Ser Pro Gln Thr Leu Lys Arg Ser Arg
 130 135 140
 Val Thr Thr Ser Leu Glu Ala Leu Pro Thr Gly Thr Val Leu Thr Asp
 145 150 155 160
 Lys Ser Gly Arg Gln Trp Lys Leu Lys Ser Phe Gln Thr Arg Asp Asn
 165 170 175
 Gln Gly Ile Leu Tyr Glu Ala Ala Pro Thr Ser Thr Leu Thr Cys Asp
 180 185 190
 Ser Gly Pro Gln Lys Gln Lys Phe Ser Leu Lys Leu Asp Ala Lys Asp
 195 200 205
 Gly Arg Leu Phe Asn Glu Gln Asn Phe Phe Gln Arg Ala Ala Lys Pro
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 Leu Gln Val Asn Lys Trp Lys Lys Leu Tyr Ser Thr Pro Leu Leu Ala
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 260 265 270
 Ser Pro Lys His Val Leu Ser Glu Arg Ser Val Leu Gln Val Ala Cys
 275 280 285
 Arg Leu Leu Asp Ala Leu Glu Phe Leu His Glu Asn Glu Tyr Val His
 290 295 300
 Gly Asn Val Thr Ala Glu Asn Ile Phe Val Asp Pro Glu Asp Gln Ser
 305 310 315 320
 Gln Val Thr Leu Ala Gly Tyr Gly Phe Ala Phe Arg Tyr Cys Pro Ser
 325 330 335
 Gly Lys His Val Ala Tyr Val Glu Gly Ser Arg Ser Pro His Glu Gly
 340 345 350
 Asp Leu Glu Phe Ile Ser Met Asp Leu His Lys Gly Cys Gly Pro Ser
 355 360 365
 Arg Arg Ser Asp Leu Gln Ser Leu Gly Tyr Cys Met Leu Lys Trp Leu
 370 375 380
 Tyr Gly Phe Leu Pro Trp Thr Asn Cys Leu Pro Asn Thr Glu Asp Ile
 385 390 395 400
 Met Lys Gln Lys Gln Lys Phe Val Asp Lys Pro Gly Pro Phe Val Gly
 405 410 415
 Pro Cys Gly His Trp Ile Arg Pro Ser Glu Thr Leu Gln Lys Tyr Leu
 420 425 430
 Lys Val Val Met Ala Leu Thr Tyr Glu Glu Lys Pro Pro Tyr Ala Met
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<212> DNA
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<211> 348
<212> PRT

<213> homo sapiens

<400> 65

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 35 40 45
 Gly Val Ala Val Asn Gly Val Arg Lys His Cys Ser Asp Lys Glu Val
 50 55 60
 Val Ser Leu Ala Lys Val Leu Ile Lys Asn Trp Lys Arg Leu Leu Asp
 65 70 75 80
 Ser Pro Gly Pro Pro Lys Gly Glu Lys Gly Glu Glu Arg Glu Lys Ala
 85 90 95
 Lys Lys Lys Glu Lys Gly Leu Glu Cys Ser Asp Trp Lys Pro Glu Ala
 100 105 110
 Gly Leu Ser Pro Pro Arg Lys Lys Arg Glu Asp Pro Lys Thr Arg Arg
 115 120 125
 Asp Ser Val Asp Ser Lys Ser Ser Ala Ser Ser Ser Pro Lys Arg Pro
 130 135 140
 Ser Val Glu Arg Ser Asn Ser Ser Lys Ser Lys Ala Glu Ser Pro Lys
 145 150 155 160
 Thr Pro Ser Ser Pro Leu Thr Pro Thr Phe Ala Ser Ser Met Cys Leu
 165 170 175
 Leu Ala Pro Cys Tyr Leu Thr Gly Asp Ser Val Arg Asp Lys Cys Val
 180 185 190
 Glu Met Leu Ser Ala Ala Leu Lys Ala Asp Asp Asp Tyr Lys Asp Tyr
 195 200 205
 Gly Val Asn Cys Asp Lys Met Ala Ser Glu Ile Glu Asp His Ile Tyr
 210 215 220
 Gln Glu Leu Lys Ser Thr Asp Met Lys Tyr Arg Asn Arg Val Arg Ser
 225 230 235 240
 Arg Ile Ser Asn Leu Lys Asp Pro Arg Asn Pro Gly Leu Arg Arg Asn
 245 250 255
 Val Leu Ser Gly Ala Ile Ser Ala Gly Leu Ile Ala Lys Met Thr Ala
 260 265 270
 Glu Glu Met Ala Ser Asp Glu Leu Arg Glu Leu Arg Asn Ala Met Thr
 275 280 285
 Gln Glu Ala Ile Arg Glu His Gln Met Ala Lys Thr Gly Gly Thr Thr
 290 295 300
 Thr Asp Leu Phe Gln Cys Ser Lys Cys Lys Lys Lys Asn Cys Thr Tyr
 305 310 315 320
 Asn Gln Val Gln Thr Arg Ser Ala Asp Glu Pro Met Thr Thr Phe Val
 325 330 335
 Leu Cys Asn Glu Cys Gly Asn Arg Trp Lys Phe Cys
 340 345

<210> 66

<211> 2430

<212> DNA

<213> homo sapiens

<400> 66

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 tccccctccga cctccctaaaaa tggaaattcat tacagaaatc tggcacccaa atgttgataa 420
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 gagggaaatg agaaatggag aattttaaaag aaaagttgcc cgctgtgtaa gaaaaagccaa 660
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 ccaattgaga aacatggcac tggtttccct gcactctacc cacctattgc tggacttctg 780

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aactgttttA	acccTCAGGA	agaattgtAA	agacctgtac	atagcacaac	atgatCCGGA	960
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<210> 67

<211> 170

<212> PRT

<213> homo sapiens

<400> 67

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							20		25				30		
Asn	Asp	Leu	Tyr	Arg	Trp	Glu	Val	Leu	Ile	Ile	Gly	Pro	Pro	Asp	Thr
	35					40					45				
Leu	Tyr	Glu	Gly	Gly	Val	Phe	Lys	Ala	His	Leu	Thr	Phe	Pro	Lys	Asp
	50					55				60					
Tyr	Pro	Leu	Arg	Pro	Pro	Lys	Met	Lys	Phe	Ile	Thr	Glu	Ile	Trp	His
65						70		75		80					
Pro	Asn	Val	Asp	Lys	Asn	Gly	Asp	Val	Cys	Ile	Ser	Ile	Leu	His	Glu
						85		90					95		
Pro	Gly	Glu	Asp	Lys	Tyr	Gly	Tyr	Glu	Lys	Pro	Glu	Glu	Arg	Trp	Leu
	100					105		110							
Pro	Ile	His	Thr	Val	Glu	Thr	Ile	Met	Ile	Ser	Val	Ile	Ser	Met	Leu
	115					120					125				
Ala	Asp	Pro	Asn	Gly	Asp	Ser	Pro	Ala	Asn	Val	Asp	Ala	Ala	Lys	Glu
	130					135		140							
Trp	Arg	Glu	Asp	Arg	Asn	Gly	Glu	Phe	Lys	Arg	Lys	Val	Ala	Arg	Cys
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Val	Arg	Lys	Ser	Gln	Glu	Thr	Ala	Phe	Glu						
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<210> 68

<211> 2258

<212> DNA

<213> homo sapiens

<400> 68

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acccggcata	cccccagctt	actcaagtcc	caggcgggag	cgtttcgtt	ggccccacc	180

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agtccagcc	agacgcctcc	ctgtcccccc	accctcttt	gatgcctcag	caagtgaaga	300
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tcatcgaaaa	acctgctcac	agcgcgcgg	ccgagccatg	agagccttc	ggatgctgct	480
ctactcaaaa	agcacccgc	tgacattcca	ctggaaagctt	tggggcgc	accggggccg	540
gcggcggggc	ctcgacacc	ccaagaacca	tcttcaccc	cagcaaggg	gtgcgacgac	600
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<210> 69

<211> 574

<212> PRT

<213> homo sapiens

<400> 69

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							20		25				30			
Arg	Trp	Pro	Pro	Pro	Pro	Lys	Pro	Arg	Leu	Lys	Ser	Gly	Gly	Gly	Phe	
							35		40				45			
Gly	Pro	Asp	Pro	Gly	Ser	Gly	Thr	Thr	Val	Pro	Ala	Arg	Arg	Leu	Pro	
							50		55				60			
Val	Pro	Arg	Pro	Ser	Phe	Asp	Ala	Ser	Ala	Ser	Glu	Glu	Glu	Glu		
							65		70				75			80
Glu	Glu	Glu	Glu	Asp	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Glu	Val	Ala	Ala	Trp
							85		90				95			
Arg	Leu	Pro	Pro	Arg	Trp	Ser	Gln	Leu	Gly	Thr	Ser	Gln	Arg	Pro	Arg	
							100		105				110			
Pro	Ser	Arg	Pro	Thr	His	Arg	Lys	Thr	Cys	Ser	Gln	Arg	Arg	Arg	Arg	
							115		120				125			
Ala	Met	Arg	Ala	Phe	Arg	Met	Leu	Leu	Tyr	Ser	Lys	Ser	Thr	Ser	Leu	
							130		135				140			
Thr	Phe	His	Trp	Lys	Leu	Trp	Gly	Arg	His	Arg	Gly	Arg	Arg	Arg	Gly	
							145		150				155			160
Leu	Ala	His	Pro	Lys	Asn	His	Leu	Ser	Pro	Gln	Gln	Gly	Gly	Ala	Thr	
							165		170				175			
Pro	Gln	Val	Pro	Ser	Pro	Cys	Cys	Arg	Phe	Asp	Ser	Pro	Arg	Gly	Pro	
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 Gly Leu Arg Trp Thr Pro Lys Ser Pro Leu Asp Pro Asp Ser Gly Leu
 225 230 235 240
 Leu Ser Cys Thr Leu Pro Asn Gly Phe Gly Gly Gln Ser Gly Pro Glu
 245 250 255
 Gly Glu Arg Ser Leu Ala Pro Pro Asp Ala Ser Ile Leu Ile Ser Asn
 260 265 270
 Val Cys Ser Ile Gly Asp His Val Ala Gln Glu Leu Phe Gln Gly Ser
 275 280 285
 Asp Leu Gly Met Ala Glu Ala Glu Arg Pro Gly Glu Lys Ala Gly
 290 295 300
 Gln His Ser Pro Leu Arg Glu Glu His Val Thr Cys Val Gln Ser Ile
 305 310 315 320
 Leu Asp Glu Phe Leu Gln Thr Tyr Gly Ser Leu Ile Pro Leu Ser Thr
 325 330 335
 Asp Glu Val Val Glu Lys Leu Glu Asp Ile Phe Gln Gln Glu Phe Ser
 340 345 350
 Thr Pro Ser Arg Lys Gly Leu Val Leu Gln Leu Ile Gln Ser Tyr Gln
 355 360 365
 Arg Met Pro Gly Asn Ala Met Val Arg Gly Phe Arg Val Ala Tyr Lys
 370 375 380
 Arg His Val Leu Thr Met Asp Asp Leu Gly Thr Leu Tyr Gly Gln Asn
 385 390 395 400
 Trp Leu Asn Asp Gln Val Met Asn Met Tyr Gly Asp Leu Val Met Asp
 405 410 415
 Thr Val Pro Glu Lys Val His Phe Phe Asn Ser Phe Phe Tyr Asp Lys
 420 425 430
 Leu Arg Thr Lys Gly Tyr Asp Gly Val Lys Arg Trp Thr Lys Asn Val
 435 440 445
 Asp Ile Phe Asn Lys Glu Leu Leu Ile Pro Ile His Leu Glu Val
 450 455 460
 His Trp Ser Leu Ile Ser Val Asp Val Arg Arg Arg Arg Thr Ile Thr Tyr
 465 470 475 480
 Phe Asp Ser Gln Arg Thr Leu Asn Arg Arg Cys Pro Lys His Ile Ala
 485 490 495
 Lys Tyr Leu Gln Ala Glu Ala Val Lys Lys Asp Arg Leu Asp Phe His
 500 505 510
 Gln Gly Trp Lys Gly Tyr Phe Lys Met Asn Val Ala Arg Gln Asn Asn
 515 520 525
 Asp Ser Asp Cys Gly Ala Phe Val Leu Gln Tyr Cys Lys His Leu Ala
 530 535 540
 Leu Ser Gln Pro Phe Ser Phe Thr Gln Gln Asp Met Pro Lys Leu Arg
 545 550 555 560
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 565 570

<210> 70
 <211> 2733
 <212> DNA
 <213> homo sapiens

<400> 70

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<210> 71
<211> 501
<212> PRT
<213> homo sapiens

<400> 71
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 35 40 45
 Arg Tyr Met Glu Val Ser Gly Asn Leu Arg Asp Leu Tyr Asp Asp Lys
 50 55 60
 Asp Gly Leu Arg Lys Glu Glu Leu Asn Ala Ile Ser Gly Pro Asn Glu
 65 70 75 80
 Phe Ala Glu Phe Tyr Asn Arg Leu Lys Gln Ile Lys Glu Phe His Arg
 85 90 95
 Lys His Pro Asn Glu Ile Cys Val Pro Met Ser Val Glu Phe Glu Glu
 100 105 110
 Leu Leu Lys Ala Arg Glu Asn Pro Ser Glu Glu Ala Gln Asn Leu Val
 115 120 125
 Glu Phe Thr Asp Glu Glu Gly Tyr Gly Arg Tyr Leu Asp Leu His Asp
 130 135 140
 Cys Tyr Leu Lys Tyr Ile Asn Leu Lys Ala Ser Glu Lys Leu Asp Tyr
 145 150 155 160
 Ile Thr Tyr Leu Ser Ile Phe Asp Gln Leu Phe Asp Ile Pro Lys Glu
 165 170 175
 Arg Lys Asn Ala Glu Tyr Lys Arg Tyr Leu Glu Met Leu Leu Glu Tyr
 180 185 190
 Leu Gln Asp Tyr Thr Asp Arg Val Lys Pro Leu Gln Asp Gln Asn Glu
 195 200 205
 Leu Phe Gly Lys Ile Gln Ala Glu Phe Glu Lys Lys Trp Glu Asn Gly
 210 215 220
 Thr Phe Pro Gly Trp Pro Lys Glu Thr Ser Ser Ala Leu Thr His Ala

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Ser Leu Gly Leu Asp Arg	Leu Lys Ser Ala	Leu Ala Leu	Gly Leu
260	265	270	
Lys Cys Gly Gly Thr Leu Glu	Glu Arg Ala Gln	Arg Leu Phe	Ser Thr
275	280	285	
Lys Gly Lys Ser Leu Glu	Ser Leu Asp Thr	Ser Leu Phe	Ala Lys Asn
290	295	300	
Pro Lys Ser Lys Gly Thr	Lys Arg Asp Thr	Glu Arg Asn	Lys Asp Ile
305	310	315	320
Ala Phe Leu Glu Ala Gln	Ile Tyr Glu Tyr Val	Glu Ile Leu	Gly Glu
325	330	335	
Gln Arg His Leu Thr His	Glu Asn Val Gln	Arg Lys Gln	Ala Arg Thr
340	345	350	
Gly Glu Glu Arg Glu Glu	Glu Glu Glu Gln	Ile Ser Glu	Ser Glu
355	360	365	
Ser Glu Asp Glu Glu Asn	Glu Ile Ile Tyr Asn	Pro Lys Asn	Leu Pro
370	375	380	
Leu Gly Trp Asp Gly	Lys Pro Ile Pro Tyr	Trp Leu Tyr	Lys Leu His
385	390	395	400
Gly Leu Asn Ile Asn	Tyr Asn Cys Glu	Ile Cys Gly	Asn Tyr Thr Tyr
405	410	415	
Arg Gly Pro Lys Ala Phe	Gln Arg His Phe	Ala Glu Trp Arg	His Ala
420	425	430	
His Gly Met Arg Cys Leu	Gly Ile Pro Asn	Thr Ala His	Phe Ala Asn
435	440	445	
val Thr Gln Ile Glu Asp	Ala Val Ser Leu	Trp Ala Lys	Leu Lys Leu
450	455	460	
Gln Lys Ala Ser Glu Arg	Trp Gln Pro Asp	Thr Glu Glu	Glu Tyr Glu
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Arg Gln Gly Leu			
500			

<210> 72
<211> 2514
<212> DNA
<213> homo sapiens

<400> 72

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<211> 522

<212> PRT

<213> homo sapiens

<400> 73

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					20			25			30				
Thr	Glu	His	Ser	Met	Leu	Ser	Ala	Asp	Glu	Asp	Ser	Pro	Ser	Ser	Pro
					35			40			45				
Glu	Asp	Thr	Ser	Tyr	Asp	Asp	Ser	Asp	Ile	Leu	Asn	Ser	Thr	Ala	Ala
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Asp	Glu	Val	Thr	Ala	His	Leu	Ala	Ala	Ala	Gly	Pro	Val	Gly	Met	Ala
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Ala	Ala	Ala	Ala	Val	Ala	Thr	Gly	Lys	Lys	Arg	Lys	Arg	Pro	His	Val
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Phe	Glu	Ser	Asn	Pro	Ser	Ile	Arg	Lys	Arg	Gln	Gln	Thr	Arg	Leu	Leu
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Arg	Lys	Leu	Arg	Ala	Thr	Leu	Asp	Glu	Tyr	Thr	Arg	Val	Gly	Gln	
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Gln	Ala	Ile	Val	Leu	Cys	Ile	Ser	Pro	Ser	Lys	Pro	Asn	Pro	Val	Phe
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Lys	Val	Phe	Gly	Ala	Ala	Pro	Leu	Glu	Asn	Val	Val	Arg	Lys	Tyr	Lys
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Ser	Met	Ile	Leu	Glu	Asp	Leu	Glu	Ser	Ala	Leu	Ala	Glu	His	Ala	Pro
					165			170			175				
Ala	Pro	Gln	Glu	Val	Asn	Ser	Glu	Leu	Pro	Pro	Leu	Thr	Ile	Asp	Gly
					180			185			190				
Ile	Pro	Val	Ser	Val	Asp	Lys	Met	Thr	Gln	Ala	Gln	Leu	Arg	Ala	Phe
					195			200			205				
Ile	Pro	Glu	Met	Leu	Lys	Tyr	Ser	Thr	Gly	Arg	Gly	Lys	Pro	Gly	Trp
					210			215			220				
Gly	Lys	Glu	Ser	Cys	Lys	Pro	Ile	Trp	Trp	Pro	Glu	Asp	Ile	Pro	Trp
					225			230			235			240	
Ala	Asn	Val	Arg	Ser	Asp	Val	Arg	Thr	Glu	Glu	Gln	Lys	Gln	Arg	Val
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Ser	Trp	Thr	Gln	Ala	Leu	Arg	Thr	Ile	val	Lys	Asn	Cys	Tyr	Lys	Gln
					260			265			270				
His	Gly	Arg	Glu	Asp	Leu	Leu	Tyr	Ala	Phe	Glu	Asp	Gln	Gln	Thr	Gln
					275			280			285				
Thr	Gln	Ala	Thr	Ala	Thr	His	Ser	Ile	Ala	His	Leu	Val	Pro	Ser	Gln
					290			295			300				
Thr	Val	Val	Gln	Thr	Phe	Ser	Asn	Pro	Asp	Gly	Thr	Val	Ser	Leu	Ile
					305			310			315			320	
Gln	Val	Gly	Thr	Gly	Ala	Thr	Val	Ala	Thr	Leu	Ala	Asp	Ala	Ser	Glu
					325			330			335				
Leu	Pro	Thr	Thr	Val	Thr	val	Ala	Gln	Val	Asn	Tyr	Ser	Ala	Val	Ala
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 370 375 380
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 385 390 395 400
 Thr Val Thr Met Ala Leu Asn Ser Glu Ala Ala Ala His Ala Val Ala
 405 410 415
 Thr Leu Ala Glu Ala Thr Leu Gln Gly Gly Gly Gln Ile Val Leu Ser
 420 425 430
 Gly Glu Thr Ala Ala Ala Val Gly Ala Leu Thr Gly Val Gln Asp Ala
 435 440 445
 Asn Gly Leu Phe Met Ala Asp Arg Ala Gly Arg Lys Trp Ile Leu Thr
 450 455 460
 Asp Lys Ala Thr Gly Leu Val Gln Ile Pro Val Ser Met Tyr Gln Thr
 465 470 475 480
 Val Val Thr Ser Leu Ala Gln Gly Asn Gly Pro Val Gln Val Ala Met
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 Ala Pro Val Thr Thr Arg Ile Ser Asp Ser Ala Val Thr Met Asp Gly
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 <212> DNA
 <213> homo sapiens

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<210> 75
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 <212> PRT
 <213> homo sapiens

<400> 75

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 35 40 45
 Val Glu Thr Val Thr Tyr Lys Asn Val Lys Phe Asn Val Trp Asp Val
 50 55 60
 Gly Gly Gln Asp Lys Ile Arg Pro Leu Trp Arg His Tyr Tyr Thr Gly
 65 70 75 80
 Thr Gln Gly Leu Ile Phe Val Val Asp Cys Ala Asp Arg Asp Arg Ile
 85 90 95
 Asp Glu Ala Arg Gln Glu Leu His Arg Ile Ile Asn Asp Arg Glu Met
 100 105 110
 Arg Asp Ala Ile Ile Leu Ile Phe Ala Asn Lys Gln Asp Leu Pro Asp
 115 120 125
 Ala Met Lys Pro His Glu Ile Gln Glu Lys Leu Gly Leu Thr Arg Ile
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 Arg Asp Arg Asn Trp Tyr Val Gln Pro Ser Cys Ala Thr Ser Gly Asp
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<211> 1407

<212> DNA

<213> homo sapiens

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<211> 249

<212> PRT

<213> homo sapiens

<400> 77

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Ser Leu Ser Ala Gln Glu Pro Ala Gln Glu Glu Leu Val Ala Glu Glu						

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Lys Gly Arg Lys Thr Arg Ala Arg Arg Ala Ile Ala Ala His Tyr Glu		
100	105	110
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Thr Val Ser Gly Trp Glu Glu Ala Arg Ile Asn Ser Ser Ser Pro Leu		
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Arg Tyr Asn Arg Gln Ile Gly Glu Phe Ile Val Thr Arg Ala Gly Leu		
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Tyr Tyr Leu Tyr Cys Gln Val His Phe Asp Glu Gly Lys Ala Val Tyr		160
165	170	175
Leu Lys Leu Asp Leu Leu Val Asp Gly Val Leu Ala Leu Arg Cys Leu		
180	185	190
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195	200	205
Leu Cys Gln Val Ser Gly Leu Leu Ala Leu Arg Pro Gly Ser Ser Leu		
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<211> 2444

<212> DNA

<213> homo sapiens

<400> 78

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 <211> 537
 <212> PRT
 <213> homo sapiens

<400> 79
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 Lys Ile Asn Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile Ser Leu Val
 50 55 60
 Thr Lys Asp Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys
 65 70 75 80
 Asp Cys Arg Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys
 85 90 95
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 115 120 125
 Gln Val Pro Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val
 130 135 140
 Arg Leu Cys Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu
 145 150 155 160
 Arg Leu Pro Pro Val Leu Ser His Pro Ile Phe Asp Asn Arg Ala Pro
 165 170 175
 Asn Thr Ala Glu Leu Lys Ile Cys Arg Val Asn Arg Asn Ser Gly Ser
 180 185 190
 Cys Leu Gly Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys Val Gln Lys
 195 200 205
 Glu Asp Ile Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu Ala Arg Gly
 210 215 220
 Ser Phe Ser Gln Ala Asp Val His Arg Gln Val Ala Ile Val Phe Arg
 225 230 235 240
 Thr Pro Pro Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val Arg Val Ser
 245 250 255
 Met Gln Leu Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu Pro Met Glu
 260 265 270
 Phe Gln Tyr Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys
 275 280 285
 Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro
 290 295 300
 Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg Ile Ala Val
 305 310 315 320
 Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln Pro Tyr
 325 330 335
 Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe Pro Thr
 340 345 350
 Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala Leu Ala Pro
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 370 375 380
 Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro Val Pro Val Leu
 385 390 395 400
 Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala Pro Lys Pro Thr
 405 410 415
 Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln Leu Gln Phe
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435	440	445
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Leu Asn Gln Gly Ile Pro Val Ala Pro His	Thr Thr Glu Pro Met Leu	
465	470	475
Met Glu Tyr Pro Glu Ala Ile Thr Arg	Leu Val Thr Ala Gln Arg Pro	480
485	490	495
Pro Asp Pro Ala Pro Ala Pro Leu Gly	Ala Pro Gly Leu Pro Asn Gly	
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<210> 80

<211> 2236

<212> DNA

<213> homo sapiens

<400> 80

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<210> 81

<211> 455

<212> PRT

<213> homo sapiens

<400> 81

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10

15

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 Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
 50 55 60
 Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
 65 70 75 80
 Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu
 85 90 95
 Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val
 100 105 110
 Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg
 115 120 125
 Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe
 130 135 140
 Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu
 145 150 155 160
 Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu
 165 170 175
 Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr
 180 185 190
 Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser
 195 200 205
 Gly Thr Thr Val Leu Leu Pro Leu Val Ile Phe Phe Gly Leu Cys Leu
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 Leu Ser Leu Leu Phe Ile Gly Leu Met Tyr Arg Tyr Gln Arg Trp Lys
 225 230 235 240
 Ser Lys Leu Tyr Ser Ile Val Cys Gly Lys Ser Thr Pro Glu Lys Glu
 245 250 255
 Gly Glu Leu Glu Gly Thr Thr Thr Lys Pro Leu Ala Pro Asn Pro Ser
 260 265 270
 Phe Ser Pro Thr Pro Gly Phe Thr Pro Thr Leu Gly Phe Ser Pro Val
 275 280 285
 Pro Ser Ser Thr Phe Thr Ser Ser Thr Tyr Thr Pro Gly Asp Cys
 290 295 300
 Pro Asn Phe Ala Ala Pro Arg Arg Glu Val Ala Pro Pro Tyr Gln Gly
 305 310 315 320
 Ala Asp Pro Ile Leu Ala Thr Ala Leu Ala Ser Asp Pro Ile Pro Asn
 325 330 335
 Pro Leu Gln Lys Trp Glu Asp Ser Ala His Lys Pro Gln Ser Leu Asp
 340 345 350
 Thr Asp Asp Pro Ala Thr Leu Tyr Ala Val Val Glu Asn Val Pro Pro
 355 360 365
 Leu Arg Trp Lys Glu Phe Val Arg Arg Leu Gly Leu Ser Asp His Glu
 370 375 380
 Ile Asp Arg Leu Glu Leu Gln Asn Gly Arg Cys Leu Arg Glu Ala Gln
 385 390 395 400
 Tyr Ser Met Leu Ala Thr Trp Arg Arg Arg Thr Pro Arg Arg Glu Ala
 405 410 415
 Thr Leu Glu Leu Leu Gly Arg Val Leu Arg Asp Met Asp Leu Leu Gly
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 Pro Ala Pro Ser Leu Leu Arg
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<210> 82

<211> 1735

<212> DNA

<213> homo sapiens

<400> 82

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 ctcagccccg cggacgcatg tccccttgcc gagttgaggg cagctggcct agagcctgtg 180
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<210> 83

<211> 495

<212> PRT

<213> homo sapiens

<400> 83

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							20		25			30			
Glu	Pro	Glu	Leu	Ser	Pro	Ala	Asp	Ala	Cys	Pro	Leu	Ala	Glu	Leu	Arg
							35		40			45			
Ala	Ala	Gly	Leu	Glu	Pro	val	Gly	His	Tyr	Glu	Glu	Val	Glu	Leu	Thr
							50		55			60			
Glu	Thr	Ser	Val	Asn	Val	Gly	Pro	Glu	Arg	Ile	Gly	Pro	His	Cys	Phe
							65		70			75		80	
Glu	Leu	Leu	Arg	Val	Leu	Gly	Lys	Gly	Gly	Tyr	Gly	Lys	Val	Phe	Gln
							85		90			95			
val	Arg	Lys	Val	Gln	Gly	Thr	Asn	Leu	Gly	Lys	Ile	Tyr	Ala	Met	Lys
							100		105			110			
val	Leu	Arg	Lys	Ala	Lys	Ile	val	Arg	Asn	Ala	Lys	Asp	Thr	Ala	His
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Thr	Arg	Ala	Glu	Arg	Asn	Ile	Leu	Glu	Ser	Val	Lys	His	Pro	Phe	Ile
							130		135			140			
val	Glu	Leu	Ala	Tyr	Ala	Phe	Gln	Thr	Gly	Gly	Lys	Leu	Tyr	Leu	Ile
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Leu	Glu	Cys	Leu	Ser	Gly	Gly	Glu	Leu	Phe	Thr	His	Leu	Glu	Arg	Glu
							165		170			175			
Gly	Ile	Phe	Leu	Glu	Asp	Thr	Ala	Cys	Phe	Tyr	Leu	Ala	Glu	Ile	Thr
							180		185			190			
Leu	Ala	Leu	Gly	His	Leu	His	Ser	Gln	Gly	Ile	Tyr	Arg	Asp	Leu	
							195		200			205			
Lys	Pro	Glu	Asn	Ile	Met	Leu	Ser	Ser	Gln	Gly	His	Ile	Lys	Leu	Thr
							210		215			220			
Asp	Phe	Gly	Leu	Cys	Lys	Glu	Ser	Ile	His	Glu	Gly	Ala	Val	Thr	His
							225		230			235		240	
Thr	Phe	Cys	Gly	Thr	Ile	Glu	Tyr	Met	Ala	Pro	Glu	Ile	Leu	Val	Arg
							245		250			255			
Ser	Gly	His	Asn	Arg	Ala	Val	Asp	Trp	Trp	Ser	Leu	Gly	Ala	Leu	Met
							260		265			270			
Tyr	Asp	Met	Leu	Thr	Gly	Ser	Pro	Pro	Phe	Thr	Ala	Glu	Asn	Arg	Lys
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Lys Thr Met Asp Lys Ile Ile Arg Gly Lys Leu Ala Leu Pro Pro Tyr
 290 295 300
 Leu Thr Pro Asp Ala Arg Asp Leu Val Lys Lys Phe Leu Lys Arg Asn
 305 310 315 320
 Pro Ser Gln Arg Ile Gly Gly Pro Gly Asp Ala Ala Asp Val Gln
 325 330 335
 Arg His Pro Phe Phe Arg His Met Asn Trp Asp Asp Leu Leu Ala Trp
 340 345 350
 Arg Val Asp Pro Pro Phe Arg Pro Cys Leu Gln Ser Glu Glu Asp Val
 355 360 365
 Ser Gln Phe Asp Thr Arg Phe Thr Arg Gln Thr Pro Val Asp Ser Pro
 370 375 380
 Asp Asp Thr Ala Leu Ser Glu Ser Ala Asn Gln Ala Phe Leu Gly Phe
 385 390 395 400
 Thr Tyr Val Ala Pro Ser Val Leu Asp Ser Ile Lys Glu Gly Phe Ser
 405 410 415
 Phe Gln Pro Lys Leu Arg Ser Pro Arg Arg Leu Asn Ser Ser Pro Arg
 420 425 430
 Val Pro Val Ser Pro Leu Lys Phe Ser Pro Phe Glu Gly Phe Arg Pro
 435 440 445
 Ser Pro Ser Leu Pro Glu Pro Thr Glu Leu Pro Leu Pro Pro Leu Leu
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 485 490 495

<210> 84
<211> 2169
<212> DNA
<213> homo sapiens

<400> 84
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<210> 85
<211> 483
<212> PRT
<213> homo sapiens

<400> 85
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35 40 45
Gly Lys Ala Ser Val Gly Ala Met Gly Gly Val Gly Ala Ser Ser
50 55 60
Ser Gly Gly Gly Pro Gly Gly Ser Gly Gly Ser Gly Gly Pro
65 70 75 80
Gly Ala Gly Thr Ser Phe Pro Pro Pro Gly Val Lys Leu Gly Arg Asp
85 90 95
Ser Gly Lys Val Thr Thr Val Val Ala Thr Leu Gly Gln Gly Pro Glu
100 105 110
Arg Ser Gln Glu Val Ala Tyr Thr Asp Ile Lys Val Ile Gly Asn Gly
115 120 125
Ser Phe Gly Val Val Tyr Gln Ala Arg Leu Ala Glu Thr Arg Glu Leu
130 135 140
Val Ala Ile Lys Lys Val Leu Gln Asp Lys Arg Phe Lys Asn Arg Glu
145 150 155 160
Leu Gln Ile Met Arg Lys Leu Asp His Cys Asn Ile Val Arg Leu Arg
165 170 175
Tyr Phe Phe Tyr Ser Ser Gly Glu Lys Lys Asp Glu Leu Tyr Leu Asn
180 185 190
Leu Val Leu Glu Tyr Val Pro Glu Thr Val Tyr Arg Val Ala Arg His
195 200 205
Phe Thr Lys Ala Lys Leu Thr Ile Pro Ile Leu Tyr Val Lys Val Tyr
210 215 220
Met Tyr Gln Leu Phe Arg Ser Leu Ala Tyr Ile His Ser Gln Gly Val
225 230 235 240
Cys His Arg Asp Ile Lys Pro Gln Asn Leu Leu Val Asp Pro Asp Thr
245 250 255
Ala Val Leu Lys Leu Cys Asp Phe Gly Ser Ala Lys Gln Leu Val Arg
260 265 270
Gly Glu Pro Asn Val Ser Tyr Ile Cys Ser Arg Tyr Tyr Arg Ala Pro
275 280 285
Glu Leu Ile Phe Gly Ala Thr Asp Tyr Thr Ser Ser Ile Asp Val Trp
290 295 300
Ser Ala Gly Cys Val Leu Ala Glu Leu Leu Gly Gln Pro Ile Phe
305 310 315 320
Pro Gly Asp Ser Gly Val Asp Gln Leu Val Glu Ile Ile Lys Val Leu
325 330 335
Gly Thr Pro Thr Arg Glu Gln Ile Arg Glu Met Asn Pro Asn Tyr Thr
340 345 350
Glu Phe Lys Phe Pro Gln Ile Lys Ala His Pro Trp Thr Lys Val Phe
355 360 365
Lys Ser Arg Thr Pro Pro Glu Ala Ile Ala Leu Cys Ser Ser Leu Leu
370 375 380
Glu Tyr Thr Pro Ser Ser Arg Leu Ser Pro Leu Glu Ala Cys Ala His
385 390 395 400
Ser Phe Phe Asp Glu Leu Arg Cys Leu Gly Thr Gln Leu Pro Asn Asn
405 410 415
Arg Pro Leu Pro Pro Leu Phe Asn Phe Ser Ala Gly Glu Leu Ser Ile
420 425 430
Gln Pro Ser Leu Asn Ala Ile Leu Ile Pro Pro His Leu Arg Ser Pro
435 440 445
Ser Gly Thr Thr Thr Leu Thr Pro Ser Ser Gln Ala Leu Thr Glu Thr
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 Asn Ser Ser

<210> 86
 <211> 1689
 <212> DNA
 <213> homo sapiens

<400> 86
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 <212> PRT
 <213> homo sapiens

<400> 87
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 35 40 45
 Tyr Leu Glu His Gln Leu Arg Ser Leu Ala Gly Thr Tyr Leu Asn Tyr
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 Ala Glu Thr Leu Pro Arg Ala Thr Val Asp Leu Glu Val Trp Arg Ser
 85 90 95
 Leu Asn Asp Lys Leu Arg Leu Thr Gln Asn Tyr Glu Ala Tyr Ser His
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 Gly Ser Ile Ala Gly Val Met Ala Ala Leu Gly Tyr Pro Leu Pro Gln
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 Asp Phe Leu Gln Lys Met Asp Asp Phe Trp Leu Leu Lys Glu Leu Gln
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 Met Gln Pro Pro Ala Ala Ala Val Thr Leu His Leu Gly Ala His Gly
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<210> 88
<211> 3073

<212> DNA

<213> homo sapiens

<400> 88

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<211> 459
<212> PRT
<213> homo sapiens

<400> 89
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 35 40 45
 Arg Gln Phe Cys Tyr Gly Asp Val His Gly Pro His Glu Ala Phe Ser
 50 55 60
 Gln Leu Trp Glu Leu Cys Cys Arg Trp Leu Arg Pro Glu Leu Arg Thr
 65 70 75 80
 Lys Glu Gln Ile Leu Glu Leu Leu Val Leu Glu Gln Phe Leu Thr Val
 85 90 95
 Leu Pro Gly Glu Ile Gln Gly Trp Val Arg Glu Gln His Pro Gly Ser
 100 105 110
 Gly Glu Glu Ala Val Ala Leu Val Glu Asp Leu Gln Lys Gln Pro Val
 115 120 125
 Lys Ala Trp Arg Gln Asp Val Pro Ser Glu Glu Ala Glu Pro Glu Ala
 130 135 140
 Ala Gly Arg Gly Ser Gln Ala Thr Gly Pro Pro Pro Thr Val Gly Ala
 145 150 155 160
 Arg Arg Arg Pro Ser Val Pro Gln Glu Gln His Ser His Ser Ala Gln
 165 170 175
 Pro Pro Ala Leu Leu Lys Glu Gly Arg Pro Gly Glu Thr Thr Asp Thr
 180 185 190
 Cys Phe Val Ser Gly Val His Gly Pro Val Ala Leu Gly Asp Ile Pro
 195 200 205
 Phe Tyr Phe Ser Arg Glu Glu Trp Gly Thr Leu Asp Pro Ala Gln Arg
 210 215 220
 Asp Leu Phe Trp Asp Ile Lys Arg Glu Asn Ser Arg Asn Thr Thr Leu
 225 230 235 240
 Gly Phe Gly Leu Lys Gly Gln Ser Glu Lys Ser Leu Leu Gln Glu Met
 245 250 255
 Val Pro Val Val Pro Gly Gln Thr Gly Ser Asp Val Thr Val Ser Trp
 260 265 270
 Ser Pro Glu Glu Ala Glu Ala Trp Glu Ser Glu Asn Arg Pro Arg Ala
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 Ala Leu Gly Pro Val Val Gly Ala Arg Arg Gly Arg Pro Pro Thr Arg
 290 295 300
 Arg Arg Gln Phe Arg Asp Leu Ala Ala Glu Lys Pro His Ser Cys Gly
 305 310 315 320
 Gln Cys Gly Lys Arg Phe Arg Trp Gly Ser Asp Leu Ala Arg His Gln
 325 330 335
 Arg Thr His Thr Gly Glu Lys Pro His Lys Cys Pro Glu Cys Asp Lys
 340 345 350
 Ser Phe Arg Ser Ser Ser Asp Leu Val Arg His Gln Gly Val His Thr
 355 360 365
 Gly Glu Lys Pro Phe Ser Cys Ser Glu Cys Gly Lys Ser Phe Ser Arg
 370 375 380
 Ser Ala Tyr Leu Ala Asp His Gln Arg Ile His Thr Gly Glu Lys Pro
 385 390 395 400
 Phe Gly Cys Ser Asp Cys Gly Lys Ser Phe Ser Leu Arg Ser Tyr Leu
 405 410 415
 Leu Asp His Arg Arg Val His Thr Gly Glu Arg Pro Phe Gly Cys Gly
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<212> DNA
<213> homo sapiens

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<210> 91
<211> 370
<212> PRT
<213> homo sapiens

<400> 91
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35 40 45
Lys Cys Ile Ala Lys Glu Ala Leu Glu Gly Lys Glu Gly Ser Met Glu
50 55 60
Asn Glu Ile Ala Val Leu His Lys Ile Lys His Pro Asn Ile Val Ala
65 70 75 80
Leu Asp Asp Ile Tyr Glu Ser Gly Gly His Leu Tyr Leu Ile Met Gln
85 90 95
Leu Val Ser Gly Glu Leu Phe Asp Arg Ile Val Glu Lys Gly Phe
100 105 110
Tyr Thr Glu Arg Asp Ala Ser Arg Leu Ile Phe Gln Val Leu Asp Ala
115 120 125
Val Lys Tyr Leu His Asp Leu Gly Ile Val His Arg Asp Leu Lys Pro
130 135 140
Glu Asn Leu Leu Tyr Tyr Ser Leu Asp Glu Asp Ser Lys Ile Met Ile
145 150 155 160
Ser Asp Phe Gly Leu Ser Lys Met Glu Asp Pro Gly Ser Val Leu Ser
165 170 175
Thr Ala Cys Gly Thr Pro Gly Tyr Val Ala Pro Glu Val Leu Ala Gln
180 185 190
Lys Pro Tyr Ser Lys Ala Val Asp Cys Trp Ser Ile Gly Val Ile Ala
195 200 205
Tyr Ile Leu Leu Cys Gly Tyr Pro Pro Phe Tyr Asp Glu Asn Asp Ala
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Lys Leu Phe Glu Gln Ile Leu Lys Ala Glu Tyr Glu Phe Asp Ser Pro
 225 230 235 240
 Tyr Trp Asp Asp Ile Ser Asp Ser Ala Lys Asp Phe Ile Arg His Leu
 245 250 255
 Met Glu Lys Asp Pro Glu Lys Arg Phe Thr Cys Glu Gln Ala Leu Gln
 260 265 270
 His Pro Trp Ile Ala Gly Asp Thr Ala Leu Asp Lys Asn Ile His Gln
 275 280 285
 Ser Val Ser Glu Gln Ile Lys Lys Asn Phe Ala Lys Ser Lys Trp Lys
 290 295 300
 Gln Ala Phe Asn Ala Thr Ala Val Val Arg His Met Arg Lys Leu Gln
 305 310 315 320
 Leu Gly Thr Ser Gln Glu Gly Gln Gly Gln Thr Ala Ser His Gly Glu
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<211> 2590
<212> DNA
<213> homo sapiens

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<210> 93
<211> 302
<212> PRT
<213> homo sapiens

<400> 93
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35 40 45
Glu Lys Glu Thr Asp Asn Thr Lys Pro Asn Arg Met Pro Val Ala Pro
50 55 60
Tyr Trp Thr Ser Pro Glu Lys Met Glu Lys Lys Leu His Ala Val Pro
65 70 75 80
Ala Ala Lys Thr Val Lys Phe Lys Cys Pro Ser Ser Gly Thr Pro Asn
85 90 95
Pro Thr Leu Arg Trp Leu Lys Asn Gly Lys Glu Phe Lys Pro Asp His
100 105 110
Arg Ile Gly Tyr Lys Val Arg Tyr Ala Thr Trp Ser Ile Ile Met
115 120 125
Asp Ser Val Val Pro Ser Asp Lys Gly Asn Tyr Thr Cys Ile Val Glu
130 135 140
Asn Glu Tyr Gly Ser Ile Asn His Thr Tyr Gln Leu Asp Val Val Glu
145 150 155 160
Arg Ser Pro His Arg Pro Ile Leu Gln Ala Gly Leu Pro Ala Asn Lys
165 170 175
Thr Val Ala Leu Gly Ser Asn Val Glu Phe Met Cys Lys Val Tyr Ser
180 185 190
Asp Pro Gln Pro His Ile Gln Trp Leu Lys His Ile Glu Val Asn Gly
195 200 205
Ser Lys Ile Gly Pro Asp Asn Leu Pro Tyr Val Gln Ile Leu Lys Val
210 215 220
Ile Met Ala Pro Val Phe Val Gly Gln Ser Thr Gly Lys Glu Thr Thr
225 230 235 240
Val Ser Gly Ala Gln Val Pro Val Gly Arg Leu Ser Cys Pro Arg Met
245 250 255
Gly Ser Phe Leu Thr Leu Gln Ala His Thr Leu His Leu Ser Arg Asp
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290 295 300

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<211> 1834
<212> DNA
<213> homo sapiens

<400> 94
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acgacttcat	taaagaaaat	ggtttctac	catttcgact	ggatcatac	agaaagatgg	960
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<210> 95

<211> 484

<212> PRT

<213> homo sapiens

<400> 95

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Tyr	Lys	Ser	Lys	His	Arg	Ile	His	His	Ser	Thr	Ser	His	Arg	Arg	Ser
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Glu	Cys	Ile	Asp	His	Lys	Ala	Gly	Gly	Arg	His	Val	Ala	Val	Lys	Ile
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Val	Lys	Asn	Val	Asp	Arg	Tyr	Cys	Glu	Ala	Ala	Arg	Ser	Glu	Ile	Gln
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Phe	Glu	Leu	Leu	Gly	Leu	Ser	Thr	Tyr	Asp	Phe	Ile	Lys	Glu	Asn	Gly
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Cys	Lys	Ser	Val	Asn	Phe	Leu	His	Ser	Asn	Lys	Leu	Thr	His	Thr	Asp
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Tyr	Asn	Pro	Lys	Ile	Lys	Arg	Asp	Glu	Arg	Thr	Leu	Ile	Asn	Pro	Asp
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Lys	Glu	His	Leu	370	Ala	Met	Met	Glu	Arg	Ile	Leu	Gly	Pro	Leu	Pro	Lys
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				390					395							
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<210> 96
<211> 2352
<212> DNA
<213> homo sapiens.

<400> 96

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2352

<210> 97
<211> 476
<212> PRT
<213> homo sapiens

<400> 97
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35 40 45
Ala Gly Gly Ser Gly Ser Tyr Trp Pro Ala Arg His Ser Gly Ala Arg
50 55 60
Val Ile Leu Leu Val Leu Tyr Arg Glu His Leu Asn Pro Asn Gly His
65 70 75 80
His Phe Leu Thr Lys Glu Glu Leu Leu Gln Arg Cys Ala Gln Lys Ser
85 90 95
Pro Arg Val Ala Pro Gly Ser Ala Pro Pro Trp Pro Ala Leu Arg Ser
100 105 110
Leu Leu His Arg Asn Leu Val Leu Arg Thr His Gln Pro Ala Arg Tyr
115 120 125
Ser Leu Thr Pro Glu Gly Leu Glu Leu Ala Gln Lys Leu Ala Glu Ser
130 135 140
Glu Gly Leu Ser Leu Leu Asn Val Gly Ile Gly Pro Lys Glu Pro Pro
145 150 155 160
Gly Glu Glu Thr Ala Val Pro Gly Ala Ala Ser Ala Glu Leu Ala Ser
165 170 175
Glu Ala Gly Val Gln Gln Gln Pro Leu Glu Leu Arg Pro Gly Glu Tyr
180 185 190
Arg Val Leu Leu Cys Val Asp Ile Gly Glu Thr Arg Gly Gly His
195 200 205
Arg Pro Glu Leu Leu Arg Glu Leu Gln Arg Leu His Val Thr His Thr
210 215 220
Val Arg Lys Leu His Val Gly Asp Phe Val Trp Val Ala Gln Glu Thr
225 230 235 240
Asn Pro Arg Asp Pro Ala Asn Pro Gly Glu Leu Val Leu Asp His Ile
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Val Glu Arg Lys Arg Leu Asp Asp Leu Cys Ser Ser Ile Ile Asp Gly
260 265 270
Arg Phe Arg Glu Gln Lys Phe Arg Leu Lys Arg Cys Gly Leu Glu Arg
275 280 285
Arg Val Tyr Leu Val Glu Glu His Gly Ser Val His Asn Leu Ser Leu
290 295 300
Pro Glu Ser Thr Leu Leu Gln Ala Val Thr Asn Thr Gln Val Ile Asp
305 310 315 320
Gly Phe Phe Val Lys Arg Thr Ala Asp Ile Lys Glu Ser Ala Ala Tyr
325 330 335
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Leu Arg Ser Arg Pro Trp Gly Thr Pro Gly Asn Pro Glu Ser Gly Ala
355 360 365
Met Thr Ser Pro Asn Pro Leu Cys Ser Leu Leu Thr Phe Ser Asp Phe
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Asn Ala Gly Ala Ile Lys Asn Lys Ala Gln Ser Val Arg Glu Val Phe
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Ala Arg Gln Leu Met Gln Val Arg Gly Val Ser Gly Glu Lys Ala Ala
405 410 415
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Asp Ala Cys Ala Thr Pro Lys Glu Gln Glu Thr Leu Leu Ser Thr Ile
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<210> 98
<211> 3166
<212> DNA
<213> homo sapiens

<400> 98

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<211> 191
<212> PRT
<213> homo sapiens

<400> 99

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 Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln
 35 40 45
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 50 55 60
 Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu
 65 70 75 80
 Met Arg Cys Gly Gly Cys Ser Asn Asp Glu Gly Leu Glu Cys Val Pro
 85 90 95
 Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His
 100 105 110
 Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys
 115 120 125
 Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Asn Pro Cys Gly
 130 135 140
 Pro Cys Ser Glu Arg Arg Lys His Leu Phe Val Gln Asp Pro Gln Thr
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<210> 100

<211> 1466

<212> DNA

<213> homo sapiens

<400> 100

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<211> 207

<212> PRT

<213> homo sapiens

<400> 101

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20	25													30	

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Phe Arg Ile His Val Glu Asn Gln Thr Arg Ala Arg Asp Asp Val Ser
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 Arg Lys Gln Leu Arg Leu Tyr Gln Leu Tyr Ser Arg Thr Ser Gly Lys
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 His Ile Gln Val Leu Gly Arg Arg Ile Ser Ala Arg Gly Glu Asp Gly
 65 70 75 80
 Asp Lys Tyr Ala Gln Leu Leu Val Glu Thr Asp Thr Phe Gly Ser Gln
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 Lys Gly Lys Leu Val Gly Lys Pro Asp Gly Thr Ser Lys Glu Cys Val
 115 120 125
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 Lys Tyr Ser Gly Trp Tyr Val Gly Phe Thr Lys Lys Gly Arg Pro Arg
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 Lys Gly Pro Lys Thr Arg Glu Asn Gln Gln Asp Val His Phe Met Lys
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<210> 102

<211> 2926

<212> DNA

<213> homo sapiens

<400> 102

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 <212> PRT
 <213> homo sapiens

<400> 103
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 35 40 45
 Ile Lys Lys Val Asn Asp Lys Asn Pro His Val Ala Leu Tyr Ala
 50 55 60
 Leu Glu Val Met Glu Ser Val Val Lys Asn Cys Gly Gln Thr Val His
 65 70 75 80
 Asp Glu Val Ala Asn Lys Gln Thr Met Glu Glu Leu Lys Asp Leu Leu
 85 90 95
 Lys Arg Gln Val Glu Val Asn Val Arg Asn Lys Ile Leu Tyr Leu Ile
 100 105 110
 Gln Ala Trp Ala His Ala Phe Arg Asn Glu Pro Lys Tyr Lys Val Val
 115 120 125
 Gln Asp Thr Tyr Gln Ile Met Lys Val Glu Gly His Val Phe Pro Glu
 130 135 140
 Phe Lys Glu Ser Asp Ala Met Phe Ala Ala Glu Arg Ala Pro Asp Trp
 145 150 155 160
 Val Asp Ala Glu Glu Cys His Arg Cys Arg Val Gln Phe Gly Val Met
 165 170 175
 Thr Arg Lys His His Cys Arg Ala Cys Gly Gln Ile Phe Cys Gly Lys
 180 185 190
 Cys Ser Ser Lys Tyr Ser Thr Ile Pro Lys Phe Gly Ile Glu Lys Glu
 195 200 205
 Val Arg Val Cys Glu Pro Cys Tyr Glu Gln Leu Asn Arg Lys Ala Glu
 210 215 220
 Gly Lys Ala Thr Ser Thr Thr Glu Leu Pro Pro Glu Tyr Leu Thr Ser
 225 230 235 240
 Pro Leu Ser Gln Gln Ser Gln Leu Pro Pro Lys Arg Asp Glu Thr Ala
 245 250 255
 Leu Gln Glu Glu Glu Leu Gln Leu Ala Leu Ala Leu Ser Gln Ser
 260 265 270
 Glu Ala Glu Glu Lys Glu Arg Leu Arg Gln Lys Ser Thr Tyr Thr Ser
 275 280 285
 Tyr Pro Lys Ala Glu Pro Met Pro Ser Ala Ser Ser Ala Pro Pro Ala
 290 295 300
 Ser Ser Leu Tyr Ser Ser Pro Val Asn Ser Ser Ala Pro Leu Ala Glu
 305 310 315 320
 Asp Ile Asp Pro Glu Leu Ala Arg Tyr Leu Asn Arg Asn Tyr Trp Glu
 325 330 335
 Lys Lys Gln Glu Glu Ala Arg Lys Ser Pro Thr Pro Ser Ala Pro Val
 340 345 350
 Pro Leu Thr Glu Pro Ala Ala Gln Pro Gly Glu Gly His Ala Ala Pro
 355 360 365
 Thr Asn Val Val Glu Asn Pro Leu Pro Glu Thr Asp Ser Gln Pro Ile
 370 375 380
 Pro Pro Ser Gly Gly Pro Phe Ser Glu Pro Gln Phe His Asn Gly Glu
 385 390 395 400

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 420 425 430
 Ile Thr Asn Asp Ser Ala Val Leu Ser Leu Phe Gln Ser Ile Asn Gly
 435 440 445
 Met His Pro Gln Leu Leu Glu Leu Leu Asn Gln Leu Asp Glu Arg Arg
 450 455 460
 Leu Tyr Tyr Glu Gly Leu Gln Asp Lys Leu Ala Gln Ile Arg Asp Ala
 465 470 475 480
 Arg Gly Ala Leu Ser Ala Leu Arg Glu Glu His Arg Glu Lys Leu Arg
 485 490 495
 Arg Ala Ala Glu Glu Ala Glu Arg Gln Arg Gln Ile Gln Leu Ala Gln
 500 505 510
 Lys Leu Glu Ile Met Arg Gln Lys Lys Glu Tyr Leu Glu Val Gln
 515 520 525
 Arg Gln Leu Ala Ile Gln Arg Leu Gln Glu Gln Glu Lys Glu Arg Gln
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 Met Arg Leu Glu Gln Gln Lys Gln Thr Val Gln Met Arg Ala Gln Met
 545 550 555 560
 Pro Ala Phe Pro Leu Pro Tyr Ala Gln Leu Gln Ala Met Pro Ala Ala
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 Gly Gly Val Leu Tyr Gln Pro Ser Gly Pro Ala Ser Phe Pro Ser Thr
 580 585 590
 Phe Ser Pro Ala Gly Ser Val Glu Gly Ser Pro Met His Gly Val Tyr
 595 600 605
 Met Ser Gln Pro Ala Pro Ala Ala Gly Pro Tyr Pro Ser Met Pro Ser
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 Thr Ala Ala Asp Pro Ser Met Val Ser Ala Tyr Met Tyr Pro Ala Gly
 625 630 635 640
 Ala Thr Gly Ala Gln Ala Ala Pro Gln Ala Gln Ala Gly Pro Thr Ala
 645 650 655
 Ser Pro Ala Tyr Ser Ser Tyr Gln Pro Thr Pro Thr Ala Gly Tyr Gln
 660 665 670
 Asn Val Ala Ser Gln Ala Pro Gln Ser Leu Pro Ala Ile Ser Gln Pro
 675 680 685
 Pro Gln Ser Ser Thr Met Gly Tyr Met Gly Ser Gln Ser Val Ser Met
 690 695 700
 Gly Tyr Gln Pro Tyr Asn Met Gln Asn Leu Met Thr Thr Leu Pro Ser
 705 710 715 720
 Gln Asp Ala Ser Leu Pro Pro Gln Gln Pro Tyr Ile Ala Gly Gln Gln
 725 730 735
 Pro Met Tyr Gln Gln Met Ala Pro Ser Gly Gly Pro Pro Gln Gln Gln
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<210> 104

<211> 540

<212> PRT

<213> homo sapiens

<400> 104

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 35 40 45
 Leu His Ile His Thr Pro Leu Leu Asp Ser Glu Arg Lys Asp Val Leu
 50 55 60
 Arg Glu Ala Glu Ile Leu His Lys Ala Arg Phe Ser Tyr Ile Leu Pro
 65 70 75 80
 Ile Leu Gly Ile Cys Asn Glu Pro Glu Phe Leu Gly Ile Val Thr Glu
 85 90 95

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 Tyr Pro Asp Val Ala Trp Pro Leu Arg Phe Arg Ile Leu His Glu Ile
 115 120 125
 Ala Leu Gly Val Asn Tyr Leu His Asn Met Thr Pro Pro Leu Leu His
 130 135 140
 His Asp Leu Lys Thr Gln Asn Ile Leu Asp Asn Glu Phe His Val
 145 150 155 160
 Lys Ile Ala Asp Phe Gly Leu Ser Lys Trp Arg Met Met Ser Leu Ser
 165 170 175
 Gln Ser Arg Ser Ser Lys Ser Ala Pro Glu Gly Gly Thr Ile Ile Tyr
 180 185 190
 Met Pro Pro Glu Asn Tyr Glu Pro Gly Gln Lys Ser Arg Ala Ser Ile
 195 200 205
 Lys His Asp Ile Tyr Ser Tyr Ala Val Ile Thr Trp Glu Val Leu Ser
 210 215 220
 Arg Lys Gln Pro Phe Glu Asp Val Thr Asn Pro Leu Gln Ile Met Tyr
 225 230 235 240
 Ser Val Ser Gln Gly His Arg Pro Val Ile Asn Glu Glu Ser Leu Pro
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 Tyr Asp Ile Pro His Arg Ala Arg Met Ile Ser Leu Ile Glu Ser Gly
 260 265 270
 Trp Ala Gln Asn Pro Asp Glu Arg Pro Ser Phe Leu Lys Cys Leu Ile
 275 280 285
 Glu Leu Glu Pro Val Leu Arg Thr Phe Glu Glu Ile Thr Phe Leu Glu
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 Ala Val Ile Gln Leu Lys Lys Thr Lys Leu Gln Ser Val Ser Ser Ala
 305 310 315 320
 Ile His Leu Cys Asp Lys Lys Lys Met Glu Leu Ser Leu Asn Ile Pro
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 val Asn His Gly Pro Gln Glu Glu Ser Cys Gly Ser Ser Gln Leu His
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 Asp Asn Asp Phe Leu Ser Arg Lys Ala Gln Asp Cys Tyr Phe Met Lys
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 Leu His His Cys Pro Gly Asn His Ser Trp Asp Ser Thr Ile Ser Gly
 385 390 395 400
 Ser Gln Arg Ala Ala Phe Cys Asp His Lys Thr Thr Pro Cys Ser Ser
 405 410 415
 Ala Ile Ile Asn Pro Leu Ser Thr Ala Gly Asn Ser Glu Arg Leu Gln
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 Pro Gly Ile Ala Gln Gln Trp Ile Gln Ser Lys Arg Glu Asp Ile Val
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 Asn Gln Met Thr Glu Ala Cys Leu Asn Gln Ser Leu Asp Ala Leu Leu
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 Ser Arg Asp Leu Ile Met Lys Glu Asp Tyr Glu Leu Val Ser Thr Lys
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 Pro Thr Arg Thr Ser Lys Val Arg Gln Leu Leu Asp Thr Thr Asp Ile
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 Gln Gly Glu Glu Phe Ala Lys Val Ile Val Gln Lys Leu Lys Asp Asn
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<210> 105
 <211> 3571
 <212> DNA
 <213> homo sapiens

<400> 105
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<210> 106

<211> 316

<212> PRT

<213> homo sapiens

<400> 106

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				20				25					30		
Asn	Val	Gly	Gly	Ser	Leu	Tyr	Tyr	Thr	Val	Arg	Ala	Leu	Thr	Arg	

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Gly Thr Ile Leu Asn Tyr Leu Arg Asp Asp Thr Ile Thr Leu Pro Gln		80
85	90	95
Asn Arg Gln Glu Ile Lys Glu Leu Met Ala Glu Ala Lys Tyr Tyr Leu		
100	105	110
Ile Gln Gly Leu Val Asn Met Cys Gln Ser Ala Leu Gln Asp Lys Lys		
115	120	125
Asp Ser Tyr Gln Pro Val Cys Asn Ile Pro Ile Ile Thr Ser Leu Lys		
130	135	140
Glu Glu Glu Arg Leu Ile Glu Ser Ser Thr Lys Pro Val Val Lys Leu		
145	150	155
Leu Tyr Asn Arg Ser Asn Asn Lys Tyr Ser Tyr Thr Ser Asn Ser Asp		160
165	170	175
Asp His Leu Leu Lys Asn Ile Glu Leu Phe Asp Lys Leu Ser Leu Arg		
180	185	190
Phe Asn Gly Arg Val Leu Phe Ile Lys Asp Val Ile Gly Asp Glu Ile		
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Cys Cys Trp Ser Phe Tyr Gly Gln Gly Arg Lys Leu Ala Glu Val Cys		
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Cys Thr Ser Ile Val Tyr Ala Thr Glu Lys Lys Gln Thr Lys Val Glu		
225	230	235
Phe Pro Glu Ala Arg Ile Tyr Glu Glu Thr Leu Asn Val Leu Leu Tyr		240
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Glu Thr Pro Arg Val Pro Asp Asn Ser Leu Leu Glu Ala Thr Ser Arg		
260	265	270
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<210> 107

<211> 1762

<212> DNA

<213> homo sapiens

<400> 107

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<210> 108

<211> 490

<212> PRT

<213> homo sapiens

<400> 108

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Arg	Leu	Arg	Tyr	Pro	Ser	Arg	Arg	Glu	Pro	Pro	Pro	Arg	Arg	Ser	Arg
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Ser	Arg	Ser	His	Asp	Arg	Leu	Pro	Tyr	Gln	Arg	Arg	Tyr	Arg	Glu	Arg
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Arg	Asp	Ser	Asp	Thr	Tyr	Arg	Cys	Glu	Glu	Arg	Ser	Pro	Ser	Phe	Gly
	65					70						75			80
Glu	Asp	Tyr	Tyr	Gly	Pro	Ser	Arg	Ser	Arg	His	Arg	Arg	Ser	Arg	
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Ser	Lys	Arg	Thr	Gly	Arg	Ser	Val	Glu	Asp	Asp	Lys	Glu	Gly	His	Leu
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Asn	Leu	Gly	Gly	Thr	Phe	Gly	Lys	Val	Val	Glu	Cys	Leu	Asp	His	
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Leu	Pro	His	Val	Arg	His	Met	Ala	Tyr	Gln	Leu	Cys	His	Ala	Leu	Arg
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Ser	Cys	Glu	Glu	Lys	Ser	Val	Lys	Asn	Thr	Ser	Ile	Arg	Val	Ala	Asp
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Phe	Gly	Ser	Ala	Thr	Phe	Asp	His	Glu	His	His	Thr	Thr	Ile	Val	Ala
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Thr	Arg	His	Tyr	Arg	Pro	Pro	Glu	Val	Ile	Leu	Glu	Leu	Gly	Trp	Ala
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Thr	Arg	Lys	Gln	Lys	Tyr	Phe	Tyr	Lys	Gly	Gly	Leu	Val	Trp	Asp	Glu
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 Ser Phe His Thr Ser Arg Asn Pro Ser Arg
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<212> DNA
<213> homo sapiens

<400> 109

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<400> 110
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35 40 45
Glu Ile Val Ser Pro Ile Arg Val Asn Ala Leu Gly Glu Pro Phe Pro
50 55 60
Thr Asn Val His Phe Lys Arg Thr Arg Arg Ser Ile Asn Ser Ala Thr
65 70 75 80
Asp Pro Trp Pro Ala Phe Ala Ser Ser Ser Ser Ser Ser Thr Ser Ser
85 90 95
Gln Ala His Tyr Arg Leu Ser Ala Phe Gly Gln Gln Phe Leu Phe Asn
100 105 110
Leu Thr Ala Asn Ala Gly Phe Ile Ala Pro Leu Phe Thr Val Thr Leu
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130 135 140
Ala Glu Leu Lys His Cys Phe Tyr Lys Gly Tyr Val Asn Thr Asn Ser
145 150 155 160
Glu His Thr Ala Val Ile Ser Leu Cys Ser Gly Met Leu Gly Thr Phe
165 170 175
Arg Ser His Asp Gly Asp Tyr Phe Ile Glu Pro Leu Gln Ser Met Asp
180 185 190
Glu Gln Glu Asp Glu Glu Gln Asn Lys Pro His Ile Ile Tyr Arg
195 200 205 210
Arg Ser Ala Pro Gln Arg Glu Pro Ser Thr Gly Arg His Ala Cys Asp
215 220
Thr Ser Glu His Lys Asn Arg His Ser Lys Asp Lys Lys Lys Thr Arg
225 230 235 240
Ala Arg Lys Trp Gly Glu Arg Ile Asn Leu Ala Gly Asp Val Ala Ala
245 250 255
Leu Asn Ser Gly Leu Ala Thr Glu Ala Phe Ser Ala Tyr Gly Asn Lys
260 265 270
Thr Asp Asn Thr Arg Glu Lys Arg Thr His Arg Arg Thr Lys Arg Phe
275 280 285
Leu Ser Tyr Pro Arg Phe Val Glu Val Leu Val Val Ala Asp Asn Arg
290 295 300
Met Val Ser Tyr His Gly Glu Asn Leu Gln His Tyr Ile Leu Thr Leu
305 310 315 320
Met Ser Ile Val Ala Ser Ile Tyr Lys Asp Pro Ser Ile Gly Asn Leu
325 330 335
Ile Asn Ile Val Ile Val Asn Leu Ile Val Ile His Asn Glu Gln Asp
340 345 350
Gly Pro Ser Ile Ser Phe Asn Ala Gln Thr Thr Leu Lys Asn Leu Cys
355 360 365
Gln Trp Gln His Ser Lys Asn Ser Pro Gly Gly Ile His His Asp Thr
370 375 380
Ala Val Leu Leu Thr Arg Gln Asp Ile Cys Arg Ala His Asp Lys Cys
385 390 395 400
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405 410 415
Ser Cys Ser Ile Ser Glu Asp Ser Gly Leu Ser Thr Ala Phe Thr Ile

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Thr Leu Asn Phe Tyr Thr Asn Pro Trp Met Trp Ser Lys Cys Ser Arg		
465	470	475
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485	490	495
Asn Glu Pro Glu Ser Arg Pro Tyr Pro Leu Pro Val Gln Leu Pro Gly		
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Ile Leu Tyr Asn Val Asn Lys Gln Cys Glu Leu Ile Phe Gly Pro Gly		
515	520	525
Ser Gln Val Cys Pro Tyr Met Met Gln Cys Arg Arg Leu Trp Cys Asn		
530	535	540
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Ala Asp Gly Thr Glu Cys Glu Pro Gly Lys His Cys Lys Tyr Gly Phe		560
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Ser Trp Ser Pro Phe Gly Thr Cys Ser Arg Thr Cys Gly Gly Gly Ile		
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Lys Thr Ala Ile Arg Glu Cys Asn Arg Pro Glu Pro Lys Asn Gly Gly		
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Lys Tyr Cys Val Gly Arg Arg Met Lys Phe Lys Ser Cys Asn Thr Glu		
625	630	635
Pro Cys Leu Lys Gln Lys Arg Asp Phe Arg Asp Glu Gln Cys Ala His		
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Phe Asp Gly Lys His Phe Asn Ile Asn Gly Leu Leu Pro Asn Val Arg		
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Trp Val Pro Lys Tyr Ser Gly Ile Leu Met Lys Asp Arg Cys Lys Leu		
675	680	685
Phe Cys Arg Val Ala Gly Asn Thr Ala Tyr Tyr Gln Leu Arg Asp Arg		
690	695	700
Val Ile Asp Gly Thr Pro Cys Gly Gln Asp Thr Asn Asp Ile Cys Val		
705	710	715
Gln Gly Leu Cys Arg Gln Ala Gly Cys Asp His Val Leu Asn Ser Lys		720
725	730	735
Ala Arg Arg Asp Lys Cys Gly Val Cys Gly Gly Asp Asn Ser Ser Cys		
740	745	750
Lys Thr Val Ala Gly Thr Phe Asn Thr Val His Tyr Gly Tyr Asn Thr		
755	760	765
Val Val Arg Ile Pro Ala Gly Ala Thr Asn Ile Asp Val Arg Gln His		
770	775	780
Ser Phe Ser Gly Glu Thr Asp Asp Asp Asn Tyr Leu Ala Leu Ser Ser		
785	790	795
Ser Lys Gly Glu Phe Leu Leu Asn Gly Asn Phe Val Val Thr Met Ala		800
805	810	815
Lys Arg Glu Ile Arg Ile Gly Asn Ala Val Val Glu Tyr Ser Gly Ser		
820	825	830
Glu Thr Ala Val Glu Arg Ile Asn Ser Thr Asp Arg Ile Glu Gln Glu		
835	840	845
Leu Leu Leu Gln Val Leu Ser Val Gly Lys Leu Tyr Asn Pro Asp Val		
850	855	860
Arg Tyr Ser Phe Asn Ile Pro Ile Glu Asp Lys Pro Gln Gln Phe Tyr		
865	870	875
Trp Asn Ser His Gly Pro Trp Gln Ala Cys Ser Lys Pro Cys Gln Gly		880
885	890	895
Glu Arg Lys Arg Lys Leu Val Cys Thr Arg Glu Ser Asp Gln Leu Thr		
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Val Ser Asp Gln Arg Cys Asp Arg Leu Pro Gln Pro Gly His Ile Thr		
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Glu Pro Cys Gly Thr Asp Cys Asp Leu Arg Trp His Val Ala Ser Arg		
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Ser Glu Cys Ser Ala Gln Cys Gly Leu Gly Tyr Arg Thr Leu Asp Ile		
945	950	955
Tyr Cys Ala Lys Tyr Ser Arg Leu Asp Gly Lys Thr Glu Lys Val Asp		960

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980	985	990													
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995	1000	1005													
Cys	Ser	Lys	Ser	Cys	Asp	Gly	Gly	Thr	Gln	Arg	Arg	Arg	Ala	Ile	Cys
1010	1015	1020													
val	Asn	Thr	Arg	Asn	Asp	Val	Leu	Asp	Asp	Ser	Lys	Cys	Thr	His	Gln
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Glu	Lys	Val	Thr	Ile	Gln	Arg	Cys	Ser	Glu	Phe	Pro	Cys	Pro	Gln	Trp
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<210> 111
<211> 2104
<212> DNA
<213> homo sapiens

<400> 111

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<210> 112
<211> 168
<212> PRT
<213> homo sapiens

<400> 112

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20	25	25	30												

33178SEQLIST.TXT

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 Leu Lys Asp Arg Thr Gly Phe Ala Val Ile His Asp Ala Ala Arg Ala
 65 70 75 80
 Gly Phe Leu Asp Thr Leu Gln Thr Leu Leu Glu Phe Gln Ala Asp Val
 85 90 95
 Asn Ile Glu Asp Asn Glu Gly Asn Leu Pro Leu His Leu Ala Ala Lys
 100 105 110
 Glu Gly His Leu Arg Val Val Glu Phe Leu Val Lys His Thr Ala Ser
 115 120 125
 Asn Val Gly His Arg Asn His Lys Gly Asp Thr Ala Cys Asp Leu Ala
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 Arg Leu Tyr Gly Arg Asn Glu Val Val Ser Leu Met Gln Ala Asn Gly
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 Ala Gly Gly Ala Thr Asn Leu Gln
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<210> 113
 <211> 2650
 <212> DNA
 <213> homo sapiens

<400> 113

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gccgcgcccc	gcgcgcgacc	gcccggccgc	cgccgcggc	gccaggagg	gattcggccg	300
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<210> 114
 <211> 537
 <212> PRT
 <213> homo sapiens

<400> 114
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 35 40 45
 Asn Tyr Asn Asn Phe His Ala Ala Gly Gly Gln Gly Leu Thr Val Phe
 50 55 60
 Gly Gly Val Asn Ser Ser His Thr Gly Thr Leu Arg Thr Arg Gly
 65 70 75 80
 Gly Thr Gly Val Thr Leu Phe Val Ala Leu Tyr Asp Tyr Glu Ala Arg
 85 90 95
 Thr Glu Asp Asp Leu Ser Phe His Lys Gly Glu Lys Phe Gln Ile Leu
 100 105 110
 Asn Ser Ser Glu Gly Asp Trp Trp Glu Ala Arg Ser Leu Thr Thr Gly
 115 120 125
 Glu Thr Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Val Asp Ser Ile
 130 135 140
 Gln Ala Glu Glu Trp Tyr Phe Gly Lys Leu Gly Arg Lys Asp Ala Glu
 145 150 155 160
 Arg Gln Leu Leu Ser Phe Gly Asn Pro Arg Gly Thr Phe Leu Ile Arg
 165 170 175
 Glu Ser Glu Thr Thr Lys Gly Ala Tyr Ser Leu Ser Ile Arg Asp Trp
 180 185 190
 Asp Asp Met Lys Gly Asp His Val Lys His Tyr Lys Ile Arg Lys Leu
 195 200 205
 Asp Asn Gly Gly Tyr Tyr Ile Thr Thr Arg Ala Gln Phe Glu Thr Leu
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 Gln Gln Leu Val Gln His Tyr Ser Glu Arg Ala Ala Gly Leu Cys Cys
 225 230 235 240
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 245 250 255
 Ser Val Lys Thr Lys Asp Val Trp Glu Ile Pro Arg Glu Ser Leu Gln
 260 265 270
 Leu Ile Lys Arg Leu Gly Asn Gly Gln Phe Gly Glu Val Trp Met Gly
 275 280 285
 Thr Trp Asn Gly Asn Thr Lys Val Ala Ile Lys Thr Leu Lys Pro Gly
 290 295 300
 Thr Met Ser Pro Glu Ser Phe Leu Glu Glu Ala Gln Ile Met Lys Lys
 305 310 315 320
 Leu Lys His Asp Lys Leu Val Gln Leu Tyr Ala Val Val Ser Glu Glu
 325 330 335
 Pro Ile Tyr Ile Val Thr Glu Tyr Met Asn Lys Gly Ser Leu Leu Asp
 340 345 350
 Phe Leu Lys Asp Gly Glu Gly Arg Ala Leu Lys Leu Pro Asn Leu Val
 355 360 365
 Asp Met Ala Ala Gln Val Ala Ala Gly Met Ala Tyr Ile Glu Arg Met
 370 375 380
 Asn Tyr Ile His Arg Asp Leu Arg Ser Ala Asn Ile Leu Val Gly Asn
 385 390 395 400
 Gly Leu Ile Cys Lys Ile Ala Asp Phe Gly Leu Ala Arg Leu Ile Glu
 405 410 415
 Asp Asn Glu Tyr Thr Ala Arg Gln Gly Ala Lys Phe Pro Ile Lys Trp
 420 425 430
 Thr Ala Pro Glu Ala Ala Leu Tyr Gly Arg Phe Thr Ile Lys Ser Asp
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 Val Trp Ser Phe Gly Ile Leu Leu Thr Glu Leu Val Thr Lys Gly Arg
 450 455 460

33178SEQLIST.TXT

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Thr	Arg	Asp	Arg	Ser	Asp	Gln	His	Ile	Gln	Leu	Gln	Leu	Ser	Ala	Glu
					50	55					60				
Ser	Val	Gly	Glu	Val	Tyr	Ile	Lys	Ser	Thr	Glu	Thr	Gly	Gln	Tyr	Leu
					65	70			75			80			
Ala	Met	Asp	Thr	Asp	Gly	Leu	Leu	Tyr	Gly	Ser	Gln	Thr	Pro	Asn	Glu
					85	90					95				
Glu	Cys	Leu	Phe	Leu	Glu	Arg	Leu	Glu	Glu	Asn	His	Tyr	Asn	Thr	Tyr
					100	105					110				
Ile	Ser	Lys	Lys	His	Ala	Glu	Lys	Asn	Trp	Phe	Val	Gly	Leu	Lys	Lys
					115	120					125				
Asn	Gly	Ser	Cys	Lys	Arg	Gly	Pro	Arg	Thr	His	Tyr	Gly	Gln	Lys	Ala
					130	135					140				
Ile	Leu	Phe	Leu	Pro	Leu	Pro	Val	Ser	Ser	Asp					
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<210> 117

<211> 1029

<212> DNA

<213> homo sapiens

<400> 117

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<210> 118

<211> 168

<212> PRT

<213> homo sapiens

<400> 118

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							20		25			30		
Gly	Lys	Lys	Glu	Lys	Pro	Glu	Lys	Val	Lys	Lys	Ser	Asp	Cys	Gly
							35		40			45		
Glu	Trp	Gln	Trp	Ser	Val	Cys	Val	Pro	Thr	Ser	Gly	Asp	Cys	Gly
							50		55			60		
Gly	Thr	Arg	Glu	Gly	Thr	Arg	Thr	Gly	Ala	Glu	Cys	Lys	Gln	Thr
							65		70		75		80	
Lys	Thr	Gln	Arg	Cys	Lys	Ile	Pro	Cys	Asn	Trp	Lys	Lys	Gln	Phe
							85		90			95		
Ala	Glu	Cys	Lys	Tyr	Gln	Phe	Gln	Ala	Trp	Gly	Glu	Cys	Asp	Leu
							100		105			110		
Thr	Ala	Leu	Lys	Thr	Arg	Thr	Gly	Ser	Leu	Lys	Arg	Ala	Leu	His
							115		120			125		
Ala	Glu	Cys	Gln	Lys	Thr	val	Thr	Ile	Ser	Lys	Pro	Cys	Gly	Lys
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 Lys Lys Gln Glu Lys Met Leu Asp
 165

<210> 119
<211> 1350
<212> DNA
<213> homo sapiens

<400> 119

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<210> 120

<211> 429

<212> PRT

<213> homo sapiens

<400> 120

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	20					25			30						
Asp	Asn	Gly	Leu	Ala	Arg	Thr	Pro	Thr	Met	Gly	Trp	Leu	His	Trp	Glu
	35					40			45						
Arg	Phe	Met	Cys	Asn	Leu	Asp	Cys	Gln	Glu	Glu	Pro	Asp	Ser	Cys	Ile
	50					55			60						
Ser	Glu	Lys	Leu	Phe	Met	Glu	Met	Ala	Glu	Leu	Met	Val	Ser	Glu	Gly
	65					70			75						80
Trp	Lys	Asp	Ala	Gly	Tyr	Glu	Tyr	Leu	Cys	Ile	Asp	Asp	Cys	Trp	Met
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Ala	Pro	Gln	Arg	Asp	Ser	Glu	Gly	Arg	Leu	Gln	Ala	Asp	Pro	Gln	Arg
						100			105						110
Phe	Pro	His	Gly	Ile	Arg	Gln	Leu	Ala	Asn	Tyr	Val	His	Ser	Lys	Gly
						115			120						125
Leu	Lys	Leu	Gly	Ile	Tyr	Ala	Asp	Val	Gly	Asn	Lys	Thr	Cys	Ala	Gly
	130					135			140						
Phe	Pro	Gly	Ser	Phe	Gly	Tyr	Tyr	Asp	Ile	Asp	Ala	Gln	Thr	Phe	Ala
	145					150			155						160
Asp	Trp	Gly	-Val	Asp	Leu	Leu	Lys	Phe	Asp	Gly	Cys	Tyr	Cys	Asp	Ser
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Leu	Glu	Asn	Leu	Ala	Asp	Gly	Tyr	Lys	His	Met	Ser	Leu	Ala	Leu	Asn
						180			185						190
Arg	Thr	Gly	Arg	Ser	Ile	Val	Tyr	Ser	Cys	Glu	Trp	Pro	Leu	Tyr	Met
	195					200									205

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 His Trp Arg Asn Phe Ala Asp Ile Asp Asp Ser Trp Lys Ser Ile Lys
 225 230 235 240
 Ser Ile Leu Asp Trp Thr Ser Phe Asn Gln Glu Arg Ile Val Asp Val
 245 250 255
 Ala Gly Pro Gly Gly Trp Asn Asp Pro Asp Met Leu Val Ile Gly Asn
 260 265 270
 Phe Gly Leu Ser Trp Asn Gln Gln Val Thr Gln Met Ala Leu Trp Ala
 275 280 285
 Ile Met Ala Ala Pro Leu Phe Met Ser Asn Asp Leu Arg His Ile Ser
 290 295 300
 Pro Gln Ala Lys Ala Leu Leu Gln Asp Lys Asp Val Ile Ala Ile Asn
 305 310 315 320
 Gln Asp Pro Leu Gly Lys Gln Gly Tyr Gln Leu Arg Gln Gly Asp Asn
 325 330 335
 Phe Glu Val Trp Glu Arg Pro Leu Ser Gly Leu Ala Trp Ala Val Ala
 340 345 350
 Met Ile Asn Arg Gln Glu Ile Gly Gly Pro Arg Ser Tyr Thr Ile Ala
 355 360 365
 Val Ala Ser Leu Gly Lys Gly Val Ala Cys Asn Pro Ala Cys Phe Ile
 370 375 380
 Thr Gln Leu Leu Pro Val Lys Arg Lys Leu Gly Phe Tyr Glu Trp Thr
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 Ser Arg Leu Arg Ser His Ile Asn Pro Thr Gly Thr Val Leu Leu Gln
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<210> 121

<211> 287

<212> DNA

<213> homo sapiens

<400> 121

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<210> 122

<211> 91

<212> PRT

<213> homo sapiens

<400> 122

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Val Phe Ala Asn Lys Gln Asp Leu Pro Asn Thr Met Asn Ala Ala Glu
35 40 45
Ile Thr Asp Lys Leu Gly Leu His Ser Leu Arg Tyr Arg Asn Trp His
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Ile Gln Ala Thr Cys Ala Thr Thr Gly His Gly Leu Tyr Glu Gly Leu
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<210> 123

<211> 3781

<212> DNA

<213> homo sapiens

<400> 123

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 <212> PRT

<213> homo sapiens

<400> 124

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 Ser Ile Glu Ser Ser Asn Asp Trp Asn Val Glu Lys Arg Ser Ile Arg
 50 55 60
 Asp Val Pro Val Val Arg Leu Pro Ala Asp Ser Pro Ile Pro Glu Arg
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 Gly Asp Leu Ser Cys Arg Met His Thr Cys Phe Asp Val Tyr Arg Cys
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 Lys Tyr Val Asp Asp Phe Gly Val Ser Val Ser Asn Thr Ile Ser Arg
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 Glu Tyr Asn Glu Leu Leu Met Ala Ile Ser Asp Ser Asp Tyr Tyr Thr
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 Pro Gly Gly Pro Pro Asp Tyr Asn Thr Ala Leu Asp Val Pro Arg Asp
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 Gly Tyr Asp Val Ser Ile Pro Val Tyr Ser Pro Leu Ser Ala Glu Val
 225 230 235 240
 Asp Leu Pro Glu Lys Gly Pro Gly Pro Arg Gln Tyr Phe Leu Leu Ser
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 355 360 365
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 370 375 380
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Thr Tyr Lys Met Pro Gly Asp Ile Lys Asn Trp Val Asp Ala His Met				
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625	630	635	640	
Lys Ala Val Ile Lys Val Thr Pro Arg Lys Lys Phe Lys Cys Pro Glu				
645	650	655		
Cys Thr Ala Ile Asp Gly Leu Ser Leu Asp Gln Thr His Met Val Glu				
660	665	670		
Arg Ser Glu Cys Ile Asn Lys Phe Ala Ser Val Phe Gly Thr Met Pro				
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<211> 1908

<212> DNA

<213> homo sapiens

<400> 125

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<211> 478

<212> PRT
<213> homo sapiens

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50 55 60
Asp Glu Val Ala Arg Gln Leu Glu Arg Ser Ala Leu Glu Asp Lys Glu
65 70 75 80
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85 90 95
Gly Lys Lys Lys Lys Lys Lys Lys Arg Gly Pro Lys Val Gln
100 105 110
Thr Asp Pro Pro Ser Val Pro Ile Cys Asp Leu Tyr Pro Asn Gly Val
115 120 125
Phe Pro Lys Gly Gln Glu Cys Glu Tyr Pro Pro Thr Gln Asp Gly Arg
130 135 140
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145 150 155 160
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Arg Gln Val Arg Lys Tyr Val Met Ser Trp Ile Lys Pro Gly Met Thr
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Met Ile Glu Ile Cys Glu Lys Leu Glu Asp Cys Ser Arg Lys Leu Ile
195 200 205
Lys Glu Asn Gly Leu Asn Ala Gly Leu Ala Phe Pro Thr Gly Cys Ser
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Leu Asn Asn Cys Ala Ala His Tyr Thr Pro Asn Ala Gly Asp Thr Thr
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245 250 255
Ser Gly Arg Ile Ile Asp Cys Ala Phe Thr Val Thr Phe Asn Pro Lys
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Tyr Asp Thr Leu Leu Lys Ala Val Lys Asp Ala Thr Asn Thr Gly Ile
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<212> DNA
 <213> homo sapiens

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Gly Arg Leu Leu Ala Cys Ser Gln Cys Gly Gln Cys Tyr His Pro Tyr						
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Cys Leu Glu Cys Thr Val Cys Glu Ala Cys Gly Lys Ala Thr Asp Pro						
65	70	75	80			
Gly Arg Leu Leu Leu Cys Asp Asp Cys Asp Ile Ser Tyr His Thr Tyr						
85	90	95				
Cys Leu Asp Pro Pro Leu Gln Thr Val Pro Lys Gly Gly Trp Lys Cys						
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Glu Thr Lys Gly Val Glu Gly Thr Asp Gly Val Lys Lys Arg Lys Arg						
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Pro Ile Asp Asp Lys Leu Asp Asn Gln Cys Val Ser Val Glu Pro Lys		
1845	1850	1855
Lys Lys Glu Gln Glu Asn Lys Thr Leu Val Leu Ser Asp Lys His Ser		
1860	1865	1870
Pro Gln Lys Ser Thr Val Thr Asn Glu Val Lys Thr Glu Val Leu		
1875	1880	1885
Ser Pro Asn Ser Lys Val Glu Ser Lys Cys Glu Thr Glu Lys Asn Asp		
1890	1895	1900
Glu Asn Lys Asp Asn Val Asp Thr Pro Cys Ser Gln Ala Ser Ala His		
1905	1910	1915
Ser Asp Leu Asn Asp Gly Glu Lys Thr Ser Leu His Pro Cys Asp Pro		
1925	1930	1935
Asp Leu Phe Glu Lys Arg Thr Asn Arg Glu Thr Ala Gly Pro Ser Ala		
1940	1945	1950
Asn Val Ile Gln Ala Ser Thr Gln Leu Pro Ala Gln Asp Val Ile Asn		
1955	1960	1965
Ser Cys Gly Ile Thr Gly Ser Thr Pro Val Leu Ser Ser Leu Leu Ala		
1970	1975	1980
Asn Glu Lys Ser Asp Asn Ser Asp Ile Arg Pro Ser Gly Ser Pro Pro		
1985	1990	1995
Pro Pro Thr Leu Pro Ala Ser Pro Ser Asn His Val Ser Ser Leu Pro		2000

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2005	2010	2015
Pro Phe Ile Ala Pro Pro Gly Arg Val	Leu Asp Asn Ala Met Asn Ser	
2020	2025	2030
Asn Val Thr Val Val Ser Arg Val Asn His Val Phe Ser Gln Gly Val		
2035	2040	2045
Gln Val Asn Pro Gly Leu Ile Pro Gly Gln Ser Thr Val Asn His Ser		
2050	2055	2060
Leu Gly Thr Gly Lys Pro Ala Thr Gln Thr Gly Pro Gln Thr Ser Gln		
2065	2070	2075
Ser Gly Thr Ser Ser Met Ser Gly Pro Gln Gln Leu Met Ile Pro Gln		
2085	2090	2095
Thr Leu Ala Gln Gln Asn Arg Glu Arg Pro Leu Leu Leu Glu Glu Gln		
2100	2105	2110
Pro Leu Leu Leu Gln Asp Leu Leu Asp Gln Glu Arg Gln Glu Gln Gln		
2115	2120	2125
Gln Gln Arg Gln Met Gln Ala Met Ile Arg Gln Arg Ser Glu Pro Phe		
2130	2135	2140
Phe Pro Asn Ile Asp Phe Asp Ala Ile Thr Asp Pro Ile Met Lys Ala		
2145	2150	2155
Lys Met Val Ala Leu Lys Gly Ile Asn Lys Val Met Ala Gln Asn Asn		
2165	2170	2175
Leu Gly Met Pro Pro Met Val Met Ser Arg Phe Pro Phe Met Gly Gln		
2180	2185	2190
Val Val Thr Gly Thr Gln Asn Ser Glu Gly Gln Asn Leu Gly Pro Gln		
2195	2200	2205
Ala Ile Pro Gln Asp Gly Ser Ile Thr His Gln Ile Ser Arg Pro Asn		
2210	2215	2220
Pro Pro Asn Phe Gly Pro Gly Phe Val Asn Asp Ser Gln Arg Lys Gln		
2225	2230	2235
Tyr Glu Glu Trp Leu Gln Glu Thr Gln Gln Leu Leu Gln Met Gln Gln		
2245	2250	2255
Lys Tyr Leu Glu Gln Ile Gly Ala His Arg Lys Ser Lys Lys Ala		
2260	2265	2270
Leu Ser Ala Lys Gln Arg Thr Ala Lys Lys Ala Gly Arg Glu Phe Pro		
2275	2280	2285
Glu Glu Asp Ala Glu Gln Leu Lys His Val Thr Glu Gln Gln Ser Met		
2290	2295	2300
Val Gln Lys Gln Leu Glu Gln Ile Arg Lys Gln Gln Lys Glu His Ala		
2305	2310	2315
Glu Leu Ile Glu Asp Tyr Arg Ile Lys Gln Gln Gln Cys Ala Met		
2325	2330	2335
Ala Pro Pro Thr Met Met Pro Ser Val Gln Pro Gln Pro Pro Leu Ile		
2340	2345	2350
Pro Gly Ala Thr Pro Pro Thr Met Ser Gln Pro Thr Phe Pro Met Val		
2355	2360	2365
Pro Gln Gln Leu Gln His Gln Gln His Thr Thr Val Ile Ser Gly His		
2370	2375	2380
Thr Ser Pro Val Arg Met Pro Ser Leu Pro Gly Trp Gln Pro Asn Ser		
2385	2390	2395
Ala Pro Ala His Leu Pro Leu Asn Pro Pro Arg Ile Gln Pro Pro Ile		
2405	2410	2415
Ala Gln Leu Pro Ile Lys Thr Cys Thr Pro Ala Pro Gly Thr Val Ser		
2420	2425	2430
Asn Ala Asn Pro Gln Ser Gly Pro Pro Pro Arg Val Glu Phe Asp Asp		
2435	2440	2445
Asn Asn Pro Phe Ser Glu Ser Phe Gln Glu Arg Glu Arg Lys Glu Arg		
2450	2455	2460
Leu Arg Glu Gln Gln Glu Arg Gln Arg Ile Gln Leu Met Gln Glu Val		
2465	2470	2475
Asp Arg Gln Arg Ala Leu Gln Gln Arg Met Glu Met Glu Gln His Gly		
2485	2490	2495
Met Val Gly Ser Glu Ile Ser Ser Ser Arg Thr Ser Val Ser Gln Ile		
2500	2505	2510
Pro Phe Tyr Ser Ser Asp Leu Pro Cys Asp Phe Met Gln Pro Leu Gly		
2515	2520	2525
Pro Leu Gln Gln Ser Pro Gln His Gln Gln Gln Met Gly Gln Val Leu		
2530	2535	2540
Gln Gln Gln Asn Ile Gln Gln Gly Ser Ile Asn Ser Pro Ser Thr Gln		

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2545 2550 2555 2560
 Thr Phe Met Gln Thr Asn Glu Arg Arg Gln Val Gly Pro Pro Ser Phe
 2565 2570 2575
 Val Pro Asp Ser Pro Ser Ile Pro Val Gly Ser Pro Asn Phe Ser Ser
 2580 2585 2590
 Val Lys Gln Gly His Gly Asn Leu Ser Gly Thr Ser Phe Gln Gln Ser
 2595 2600 2605
 Pro Val Arg Pro Ser Phe Thr Pro Ala Leu Pro Ala Ala Pro Pro Val
 2610 2615 2620
 Ala Asn Ser Ser Leu Pro Cys Gly Gln Asp Ser Thr Ile Thr His Gly
 2625 2630 2635 2640
 His Ser Tyr Pro Gly Ser Thr Gln Ser Leu Ile Gln Leu Tyr Ser Asp
 2645 2650 2655
 Ile Ile Pro Glu Glu Lys Gly Lys Lys Arg Thr Arg Lys Lys Lys
 2660 2665 2670
 Arg Asp Asp Asp Ala Glu Ser Thr Lys Ala Pro Ser Thr Pro His Ser
 2675 2680 2685
 Asp Ile Thr Ala Pro Pro Thr Pro Gly Ile Ser Glu Thr Thr Ser Thr
 2690 2695 2700
 Pro Ala Val Ser Thr Pro Ser Glu Leu Pro Gln Gln Ala Asp Gln Glu
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 Ser Val Glu Pro Val Gly Pro Ser Thr Pro Asn Met Ala Ala Gly Gln
 2725 2730 2735
 Leu Cys Thr Glu Leu Glu Asn Lys Leu Pro Asn Ser Asp Phe Ser Gln
 2740 2745 2750
 Ala Thr Pro Asn Gln Gln Thr Tyr Ala Asn Ser Glu Val Asp Lys Leu
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 Ser Met Glu Thr Pro Ala Lys Thr Glu Glu Ile Lys Leu Glu Lys Ala
 2770 2775 2780
 Glu Thr Glu Ser Cys Pro Gly Gln Glu Glu Pro Lys Leu Glu Glu Gln
 2785 2790 2795 2800
 Asn Gly Ser Lys Val Glu Gly Asn Ala Val Ala Cys Pro Val Ser Ser
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 Ala Gln Ser Pro Pro His Ser Ala Gly Ala Pro Ala Ala Lys Gly Asp
 2820 2825 2830
 Ser Gly Asn Glu Leu Leu Lys His Leu Leu Lys Asn Lys Lys Ser Ser
 2835 2840 2845
 Ser Leu Leu Asn Gln Lys Pro Glu Gly Ser Ile Cys Ser Glu Asp Asp
 2850 2855 2860
 Cys Thr Lys Asp Asn Lys Leu Val Glu Lys Gln Asn Pro Ala Glu Gly
 2865 2870 2875 2880
 Leu Gln Thr Leu Gly Ala Gln Met Gln Gly Gly Phe Gly Cys Gly Asn
 2885 2890 2895
 Gln Leu Pro Lys Thr Asp Gly Gly Ser Glu Thr Lys Lys Gln Arg Ser
 2900 2905 2910
 Lys Arg Thr Gln Arg Thr Gly Glu Lys Ala Ala Pro Arg Ser Lys Lys
 2915 2920 2925
 Arg Lys Lys Asp Glu Glu Lys Gln Ala Met Tyr Ser Ser Thr Asp
 2930 2935 2940
 Thr Phe Thr His Leu Lys Gln Val Arg Gln Leu Ser Leu Leu Pro Leu
 2945 2950 2955 2960
 Met Glu Pro Ile Ile Gly Val Asn Phe Ala His Phe Leu Pro Tyr Gly
 2965 2970 2975
 Ser Gly Gln Phe Asn Ser Gly Asn Arg Leu Leu Gly Thr Phe Gly Ser
 2980 2985 2990
 Ala Thr Leu Glu Gly Val Ser Asp Tyr Tyr Ser Gln Leu Ile Tyr Lys
 2995 3000 3005
 Gln Asn Asn Leu Ser Asn Pro Pro Thr Pro Pro Ala Ser Leu Pro Pro
 3010 3015 3020
 Thr Pro Pro Pro Met Ala Cys Gln Lys Met Ala Asn Gly Phe Ala Thr
 3025 3030 3035 3040
 Thr Glu Glu Leu Ala Gly Lys Ala Gly Val Leu Val Ser His Glu Val
 3045 3050 3055
 Thr Lys Thr Leu Gly Pro Lys Pro Phe Gln Leu Pro Phe Arg Pro Gln
 3060 3065 3070
 Asp Asp Leu Leu Ala Arg Ala Leu Ala Gln Gly Pro Lys Thr Val Asp
 3075 3080 3085
 Val Pro Ala Ser Leu Pro Thr Pro Pro His Asn Asn Gln Glu Glu Leu

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3105	3110	3115	3120
Pro Ser Ser Ser Pro Glu Ser Val Val Gly Val Glu Val Ser Arg Tyr	3125	3130	3135
3140	3145	3150	3155
Pro Ile Ile Pro Ile Leu Pro Ser Thr Ala Gly Lys Ser Ser Glu Ser	3155	3160	3165
Arg Arg Asn Asp Ile Lys Thr Glu Pro Gly Thr Leu Tyr Phe Ala Ser	3170	3175	3180
3185	3190	3195	3200
Pro Phe Gly Pro Ser Pro Asn Gly Pro Arg Ser Gly Leu Ile Ser Val	3205	3210	3215
Ala Ile Thr Leu His Pro Thr Ala Ala Glu Asn Ile Ser Ser Val Val	3220	3225	3230
Ala Ala Phe Ser Asp Leu Leu His Val Arg Ile Pro Asn Ser Tyr Glu	3235	3240	3245
3250	3255	3260	3265
Val Ser Ser Ala Pro Asp Val Pro Ser Met Gly Leu Val Ser Ser His	3270	3275	3280
Arg Ile Asn Pro Gly Leu Glu Tyr Arg Gln His Leu Leu Leu Arg Gly	3285	3290	3295
Pro Pro Pro Gly Ser Ala Asn Pro Pro Arg Leu Val Ser Ser Tyr Arg	3300	3305	3310
Leu Lys Gln Pro Asn Val Pro Phe Pro Pro Thr Ser Asn Gly Leu Ser	3315	3320	3325
Gly Tyr Lys Asp Ser Ser His Gly Ile Ala Glu Ser Ala Ala Leu Arg	3330	3335	3340
Ser Thr Lys Arg Val Glu Lys Asp Ile Val Phe Cys Ser Asn Asn Cys	3345	3350	3355
Phe Ile Leu Tyr Ser Ser Thr Ala Gln Ala Lys Asn Ser Glu Asn Lys	3365	3370	3375
Glu Ser Ile Pro Ser Leu Pro Gln Ser Pro Met Arg Glu Thr Pro Ser	3380	3385	3390
Lys Ala Phe His Gln Tyr Ser Asn Asn Ile Ser Thr Leu Asp Val His	3395	3400	3405
Cys Leu Pro Gln Leu Pro Glu Lys Ala Ser Pro Pro Ala Ser Pro Pro	3410	3415	3420
Ile Ala Phe Pro Pro Ala Phe Glu Ala Ala Gln Val Glu Ala Lys Pro	3425	3430	3435
Asp Glu Leu Lys Val Thr Val Lys Leu Lys Pro Arg Leu Arg Ala Val	3445	3450	3455
His Gly Gly Phe Glu Asp Cys Arg Pro Leu Asn Lys Lys Trp Arg Gly	3460	3465	3470
Met Lys Trp Lys Lys Trp Ser Ile His Ile Val Ile Pro Lys Gly Thr	3475	3480	3485
Phe Lys Pro Pro Cys Glu Asp Glu Ile Asp Glu Phe Leu Lys Lys Leu	3490	3495	3500
Gly Thr Ser Leu Lys Pro Asp Pro Val Pro Lys Asp Tyr Arg Lys Cys	3505	3510	3515
Cys Phe Cys His Glu Glu Gly Asp Gly Leu Thr Asp Gly Pro Ala Arg	3525	3530	3535
Leu Leu Asn Leu Asp Leu Asp Leu Trp Val His Leu Asn Cys Ala Leu	3540	3545	3550
Trp Ser Thr Glu Val Tyr Glu Thr Gln Ala Gly Ala Leu Ile Asn Val	3555	3560	3565
Glu Leu Ala Leu Arg Arg Gly Leu Gln Met Lys Cys Val Phe Cys His	3570	3575	3580
Lys Thr Gly Ala Thr Ser Gly Cys His Arg Phe Arg Cys Thr Asn Ile	3585	3590	3595
Tyr His Phe Thr Cys Ala Ile Lys Ala Gln Cys Met Phe Phe Lys Asp	3605	3610	3615
Lys Thr Met Leu Cys Pro Met His Lys Pro Lys Gly Ile His Glu Gln	3620	3625	3630
Glu Leu Ser Tyr Phe Ala Val Phe Arg Arg Val Tyr Val Gln Arg Asp			

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3635	3640	3645
Glu Val Arg Gln Ile Ala Ser Ile Val Gln Arg Gly Glu Arg Asp His		
3650	3655	3660
Thr Phe Arg Val Gly Ser Leu Ile Phe His Thr Ile Gly Gln Leu Leu		
3665	3670	3675
Pro Gln Gln Met Gln Ala Phe His Ser Pro Lys Ala Leu Phe Pro Val		3680
3685	3690	3695
Gly Tyr Glu Ala Ser Arg Leu Tyr Trp Ser Thr Arg Tyr Ala Asn Arg		
3700	3705	3710
Arg Cys Arg Tyr Leu Cys Ser Ile Glu Glu Lys Asp Gly Arg Pro Val		
3715	3720	3725
Phe Val Ile Arg Ile Val Glu Gln Gly His Glu Asp Leu Val Leu Ser		
3730	3735	3740
Asp Ile Ser Pro Lys Gly Val Trp Asp Lys Ile Leu Glu Pro Val Ala		
3745	3750	3755
Cys Val Arg Lys Lys Ser Glu Met Leu Gln Leu Phe Pro Ala Tyr Leu		3760
3765	3770	3775
Lys Gly Glu Asp Leu Phe Gly Leu Thr Val Ser Ala Val Ala Arg Ile		
3780	3785	3790
Ala Glu Ser Leu Pro Gly Val Glu Ala Cys Glu Asn Tyr Thr Phe Arg		
3795	3800	3805
Tyr Gly Arg Asn Pro Leu Met Glu Leu Pro Leu Ala Val Asn Pro Thr		
3810	3815	3820
Gly Cys Ala Arg Ser Glu Pro Lys Met Ser Ala His Val Lys Arg Pro		
3825	3830	3835
His Thr Leu Asn Ser Thr Ser Thr Lys Ser Phe Gln Ser Thr Val		
3845	3850	3855
Thr Gly Glu Leu Asn Ala Pro Tyr Ser Lys Gln Phe Val His Ser Lys		
3860	3865	3870
Ser Ser Gln Tyr Arg Lys Met Lys Thr Glu Trp Lys Ser Asn Val Tyr		
3875	3880	3885
Leu Ala Arg Ser Arg Ile Gln Gly Leu Gly Leu Tyr Ala Ala Arg Asp		
3890	3895	3900
Ile Glu Lys His Thr Met Val Ile Glu Tyr Ile Gly Thr Ile Ile Arg		
3905	3910	3915
Asn Glu Val Ala Asn Arg Lys Glu Lys Leu Tyr Glu Ser Gln Asn Arg		
3925	3930	3935
Gly Val Tyr Met Phe Arg Met Asp Asn Asp His Val Ile Asp Ala Thr		
3940	3945	3950
Leu Thr Gly Gly Pro Ala Arg Tyr Ile Asn His Ser Cys Ala Pro Asn		
3955	3960	3965
Cys Val Ala Glu Val Val Thr Phe Glu Arg Gly His Lys Ile Ile Ile		
3970	3975	3980
Ser Ser Ser Arg Arg Ile Gln Lys Gly Glu Glu Leu Cys Tyr Asp Tyr		
3985	3990	3995
Lys Phe Asp Phe Glu Asp Asp Gln His Lys Ile Pro Cys His Cys Gly		4000
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<211> 2663
<212> DNA
<213> homo sapiens

<400> 129

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ctcacaccgc	agctgccatg	gccaccaata	aggagcgact	ctttgcggct	ggtgccctgg	180
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gccgaagcat	ccagaagaac	atggtgtaca	cgtgtcaccg	cgacaaaaac	tgtatcatca	540
acaaggtgac	caggaatcgc	tgccagtact	gccggctaca	gaagtgtctc	gaagtggca	600
tgtccaagga	agctgtgcga	aatgaccgga	acaagaagaa	gaaagaggtg	aaggaagaag	660

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aagcccatca	ggagacttc	ccctcgctc	gccagctggg	caagtatacc	acgaactcca	780
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<211> 454

<212> PRT

<213> homo sapiens

<400> 130

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Leu	Arg	Gly	Ser	Pro	Pro	Phe	Glu	Met	Leu	Ser	Pro	Ser	Phe	Arg	Gly
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Leu	Gly	Gln	Pro	Asp	Leu	Pro	Lys	Glu	Met	Ala	Ser	Leu	Ser	Val	Glu
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Thr	Gln	Ser	Thr	Ser	Ser	Glu	Glu	Met	Val	Pro	Ser	Ser	Pro	Ser	Pro
								65		70				80	
Pro	Pro	Pro	Pro	Arg	Val	Tyr	Lys	Pro	Cys	Phe	Val	Cys	Asn	Asp	Lys
								85		90				95	
Ser	Ser	Gly	Tyr	His	Tyr	Gly	Val	Ser	Ser	Cys	Glu	Gly	Cys	Lys	Gly
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Phe	Phe	Arg	Arg	Ser	Ile	Gln	Lys	Asn	Met	Val	Tyr	Thr	Cys	His	Arg
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Asp	Lys	Asn	Cys	Ile	Ile	Asn	Lys	Val	Thr	Arg	Asn	Arg	Cys	Gln	Tyr
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Cys	Arg	Leu	Gln	Lys	Cys	Phe	Glu	Val	Gly	Met	Ser	Lys	Glu	Ala	Val
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Arg	Asn	Asp	Arg	Asn	Lys	Lys	Lys	Glu	Val	Lys	Glu	Glu	Gly	Ser	
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Pro	Asp	Ser	Tyr	Glu	Leu	Ser	Pro	Gln	Leu	Glu	Glu	Leu	Ile	Thr	Lys
								180		185				190	
Val	Ser	Lys	Ala	His	Gln	Glu	Thr	Phe	Pro	Ser	Leu	Cys	Gln	Leu	Gly
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Lys	Tyr	Thr	Thr	Asn	Ser	Ala	Asp	His	Arg	Val	Gln	Leu	Asp	Leu	

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Gly	Leu	Trp Asp Lys Phe Ser Glu Leu Ala Thr Lys Cys Ile Ile Lys
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Ile	Val Glu Phe Ala Lys Arg Leu Pro Gly Phe Thr Gly Leu Ser Ile	
	245	250
Ala	Asp Gln Ile Thr Leu Leu Lys Ala Ala Cys Leu Asp Ile Leu Met	
	260	265
Leu	Arg Ile Cys Thr Arg Tyr Thr Pro Glu Gln Asp Thr Met Thr Phe	
	275	280
Ser	Asp Gly Leu Thr Leu Asn Arg Thr Gln Met His Asn Ala Gly Phe	
	290	295
Gly	Pro Leu Thr Asp Leu Val Phe Ala Phe Ala Gln Leu Leu Pro	
305	310	315
Leu	Glu Met Asp Asp Thr Glu Thr Gly Leu Leu Ser Ala Ile Cys Leu	
	325	330
Ile	Cys Gly Asp Arg Met Asp Leu Glu Glu Pro Glu Lys Val Asp Lys	
	340	345
Leu	Gln Glu Pro Leu Leu Glu Ala Leu Arg Leu Tyr Ala Arg Arg Arg	
	355	360
Arg	Pro Ser Gln Pro Tyr Met Phe Pro Arg Met Leu Met Lys Ile Thr	
	370	375
Asp	Leu Arg Gly Ile Ser Thr Lys Gly Ala Glu Arg Ala Ile Thr Leu	
	385	390
Lys	Met Glu Ile Pro Gly Pro Met Pro Pro Leu Ile Arg Glu Met Leu	
	405	410
Glu	Asn Pro Glu Met Phe Glu Asp Asp Ser Ser Gln Pro Gly Pro His	
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Pro	Asn Ala Ser Ser Glu Asp Glu Val Pro Gly Gly Gln Gly Lys Gly	
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Gly	Leu Lys Ser Pro Ala	
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ccc	at	cc	gg	tttt	acttgc	4140
catgt	cc	cc	gg	tttt	acttgc	4200
cccagg	cc	cc	gg	tttt	acttgc	4260
agg	cc	cc	gg	tttt	acttgc	4320
atgg	cc	cc	gg	tttt	acttgc	4380
gggg	cc	cc	gg	tttt	acttgc	4440
gggt	cc	cc	gg	tttt	acttgc	4500
ccac	cc	cc	gg	tttt	acttgc	4560
gg	cc	cc	gg	tttt	acttgc	4620
gt	cc	cc	gg	tttt	acttgc	4680
tg	cc	cc	gg	tttt	acttgc	4740
at	cc	cc	gg	tttt	acttgc	4800
gg	cc	cc	gg	tttt	acttgc	4860
gc	cc	cc	gg	tttt	acttgc	4920
tat	cc	cc	gg	tttt	acttgc	4980
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cgt	cc	cc	gg	tttt	acttgc	5113

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<212> PRT
<213> homo sapiens

<400> 132
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 35 40 45
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 50 55 60
 Ala Ser Leu Arg Ser Glu Ile Glu Ser Asp Gly His Glu Phe Glu Ala
 65 70 75 80
 Glu Ser Trp Ser Leu Ala Val Asp Ala Ala Tyr Ala Lys Lys Gln Lys
 85 90 95
 Arg Glu Val Val Lys Arg Gln Asp Val Leu Tyr Glu Leu Met Gln Thr
 100 105 110
 Glu Val His His Val Arg Thr Leu Lys Ile Met Leu Lys Val Tyr Ser
 115 120 125
 Arg Ala Leu Gln Glu Glu Leu Gln Phe Ser Ser Lys Ala Ile Gly Arg
 130 135 140
 Leu Phe Pro Cys Ala Asp Asp Leu Leu Glu Thr His Ser His Phe Leu
 145 150 155 160
 Ala Arg Leu Lys Glu Arg Arg Gln Glu Ser Leu Glu Glu Gly Ser Asp
 165 170 175
 Arg Asn Tyr Val Ile Gln Lys Ile Gly Asp Leu Leu Val Gln Gln Phe
 180 185 190
 Ser Gly Glu Asn Gly Glu Arg Met Lys Glu Lys Tyr Gly Val Phe Cys
 195 200 205
 Ser Gly His Asn Glu Ala Val Ser His Tyr Lys Leu Leu Leu Gln Gln
 210 215 220
 Asn Lys Lys Phe Gln Asn Leu Ile Lys Lys Ile Gly Asn Phe Ser Ile
 225 230 235 240
 Val Arg Arg Leu Gly Val Gln Glu Cys Ile Leu Leu Val Thr Gln Arg
 245 250 255
 Ile Thr Lys Tyr Pro Val Leu Val Glu Arg Ile Ile Gln Asn Thr Glu
 260 265 270
 Ala Gly Thr Glu Asp Tyr Glu Asp Leu Thr Gln Ala Leu Asn Leu Ile
 275 280 285
 Lys Asp Ile Ile Ser Gln Val Asp Ala Lys Val Ser Glu Cys Glu Lys
 290 295 300
 Gly Gln Arg Leu Arg Glu Ile Ala Gly Lys Met Asp Leu Lys Ser Ser
 305 310 315 320
 Ser Lys Leu Lys Asn Gly Leu Thr Phe Arg Lys Glu Asp Met Leu Gln
 325 330 335
 Arg Gln Leu His Leu Glu Gly Met Leu Cys Trp Lys Thr Thr Ser Gly
 340 345 350
 Arg Leu Lys Asp Ile Leu Ala Ile Leu Leu Thr Asp Val Leu Leu Leu
 355 360 365
 Leu Gln Glu Lys Asp Gln Lys Tyr Val Phe Ala Ser Val Asp Ser Lys
 370 375 380
 Pro Pro Val Ile Ser Leu Gln Lys Leu Ile Val Arg Glu Val Ala Asn
 385 390 395 400
 Glu Glu Lys Ala Met Phe Leu Ile Ser Ala Ser Leu Gln Gly Pro Glu
 405 410 415
 Met Tyr Glu Ile Tyr Thr Ser Ser Lys Glu Asp Arg Asn Ala Trp Met
 420 425 430
 Ala His Ile Gln Arg Ala Val Glu Ser Cys Pro Asp Glu Glu Gly
 435 440 445
 Pro Phe Ser Leu Pro Glu Glu Glu Arg Lys Val Val Glu Ala Arg Ala
 450 455 460
 Thr Arg Leu Arg Asp Phe Gln Glu Arg Leu Ser Met Lys Asp Gln Leu
 465 470 475 480
 Ile Ala Gln Ser Leu Leu Glu Lys Gln Gln Ile Tyr Leu Glu Met Ala
 485 490 495
 Glu Met Gly Gly Leu Glu Asp Leu Pro Gln Pro Arg Gly Leu Phe Arg
 500 505 510
 Gly Gly Asp Pro Ser Glu Thr Leu Gln Gly Glu Leu Ile Leu Lys Ser
 515 520 525
 Ala Met Ser Glu Ile Glu Gly Ile Gln Ser Leu Ile Cys Arg Arg Leu
 530 535 540
 Gly Ser Ala Asn Gly Gln Ala Glu Asp Gly Gly Ser Ser Thr Gly Pro
 545 550 555 560

33178SEQLIST.TXT

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 Thr Lys Asn Gly Ser Phe Lys Lys Lys Val Ser Ser Thr Asp Pro Arg
 580 585 590
 Pro Arg Asp Trp Arg Gly Pro Pro Asn Ser Pro Asp Leu Lys Leu Ser
 595 600 605
 Asp Ser Asp Ile Pro Gly Ser Ser Glu Glu Ser Pro Gln Val Val Glu
 610 615 620
 Ala Pro Gly Thr Glu Ser Asp Pro Arg Leu Pro Thr Val Leu Glu Ser
 625 630 635 640
 Glu Leu Val Gln Arg Ile Gln Thr Leu Ser Gln Leu Leu Leu Asn Leu
 645 650 655
 Gln Ala Val Ile Ala His Gln Asp Ser Tyr Val Glu Thr Gln Arg Ala
 660 665 670
 Ala Ile Gln Glu Arg Glu Lys Gln Phe Arg Leu Gln Ser Thr Arg Gly
 675 680 685
 Asn Leu Leu Glu Gln Glu Arg Gln Arg Asn Phe Glu Lys Gln Arg
 690 695 700
 Glu Glu Arg Ala Ala Leu Glu Lys Leu Gln Ser Gln Leu Arg His Glu
 705 710 715 720
 Gln Gln Arg Trp Glu Arg Glu Arg Gln Trp Gln His Gln Glu Leu Glu
 725 730 735
 Arg Ala Gly Ala Arg Leu Gln Glu Arg Glu Gly Glu Ala Arg Gln Leu
 740 745 750
 Arg Glu Arg Leu Glu Gln Glu Arg Ala Glu Leu Glu Arg Gln Arg Gln
 755 760 765
 Ala Tyr Gln His Asp Leu Glu Arg Leu Arg Glu Ala Gln Arg Ala Val
 770 775 780
 Glu Arg Glu Arg Glu Arg Leu Glu Leu Leu Arg Arg Leu Lys Lys Gln
 785 790 795 800
 Asn Thr Ala Pro Gly Ala Leu Pro Pro Asp Thr Leu Ala Glu Ala Gln
 805 810 815
 Pro Pro Ser His Pro Pro Ser Phe Asn Gly Glu Gly Leu Glu Gly Pro
 820 825 830
 Arg Val Ser Met Leu Pro Ser Gly Val Gly Pro Glu Tyr Ala Glu Arg
 835 840 845
 Pro Glu Val Ala Arg Arg Asp Ser Ala Pro Thr Glu Ser Arg Leu Ala
 850 855 860
 Lys Ser Asp Val Pro Ile Gln Leu Leu Ser Ala Thr Asn Gln Phe Gln
 865 870 875 880
 Arg Gln Ala Ala Val Gln Gln Ile Pro Thr Lys Leu Ala Ala Ser
 885 890 895
 Thr Lys Gly Lys Asp Lys Gly Lys Ser Arg Gly Ser Gln Arg
 900 905 910
 Trp Glu Ser Ser Ala Ser Phe Asp Leu Lys Gln Gln Leu Leu Leu Asn
 915 920 925
 Lys Leu Met Gly Lys Asp Glu Ser Thr Ser Arg Asn Arg Arg Ser Leu
 930 935 940
 Ser Pro Ile Leu Pro Gly Arg His Ser Pro Ala Pro Pro Pro Asp Pro
 945 950 955 960
 Gly Phe Pro Ala Pro Ser Pro Pro Pro Ala Asp Ser Pro Ser Glu Gly
 965 970 975
 Phe Ser Leu Lys Ala Gly Gly Thr Ala Leu Leu Pro Gly Pro Pro Ala
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 <211> 1595
 <212> DNA
 <213> homo sapiens

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<210> 134

<211> 395

<212> PRT

<213> homo sapiens

<400> 134

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Pro Lys Arg Arg Arg Ala Ser Ser Leu Ser Arg Asp Ala Glu Arg Arg						
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Ala Tyr Gln Trp Cys Arg Glu Tyr Leu Gly Gly Ala Trp Arg Arg Val						
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Gln Pro Glu Glu Leu Arg Val Tyr Pro Val Ser Gly Gly Leu Ser Asn						
65	70	75	80			
Leu Leu Phe Arg Cys Ser Leu Pro Asp His Leu Pro Ser Val Gly Glu						
85	90	95				
Glu Pro Arg Glu Val Leu Leu Arg Leu Tyr Gly Ala Ile Leu Gln Gly						
100	105	110				
Val Asp Ser Leu Val Leu Glu Ser Val Met Phe Ala Ile Leu Ala Glu						
115	120	125				
Arg Ser Leu Gly Pro Gln Leu Tyr Gly Val Phe Pro Glu Gly Arg Leu						
130	135	140				
Glu Gln Tyr Ile Pro Ser Arg Pro Leu Lys Thr Gln Glu Leu Arg Glu						
145	150	155	160			
Pro Val Leu Ser Ala Ala Ile Ala Thr Lys Met Ala Gln Phe His Gly						
165	170	175				
Met Glu Met Pro Phe Thr Lys Glu Pro His Trp Leu Phe Gly Thr Met						
180	185	190				
Glu Arg Tyr Leu Lys Gln Ile Gln Asp Leu Pro Pro Thr Gly Leu Pro						
195	200	205				
Glu Met Asn Leu Leu Glu Met Tyr Ser Leu Lys Asp Glu Met Gly Asn						
210	215	220				
Leu Arg Lys Leu Leu Glu Ser Thr Pro Ser Pro Val Val Phe Cys His						
225	230	235	240			
Asn Asp Ile Gln Glu Gly Asn Ile Leu Leu Leu Ser Glu Pro Glu Asn						
245	250	255				
Ala Asp Ser Leu Met Leu Val Asp Phe Glu Tyr Ser Ser Tyr Asn Tyr						
260	265	270				
Arg Gly Phe Asp Ile Gly Asn His Phe Cys Glu Trp Val Tyr Asp Tyr						
275	280	285				

33178SEQLIST.TXT

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 Thr Gln Glu Gln Gln Leu His Phe Ile Arg His Tyr Leu Ala Glu Ala
 305 310 315 320
 Lys Lys Gly Glu Thr Leu Ser Gln Glu Glu Gln Arg Lys Leu Glu Glu
 325 330 335
 Asp Leu Leu Val Glu Val Ser Arg Tyr Ala Leu Ala Ser His Phe Phe
 340 345 350
 Trp Gly Leu Trp Ser Ile Leu Gln Ala Ser Met Ser Thr Ile Glu Phe
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 Gly Tyr Leu Asp Tyr Ala Gln Ser Arg Phe Gln Phe Tyr Phe Gln Gln
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 Lys Gly Gln Leu Thr Ser Val His Ser Ser Ser
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<210> 135
 <211> 1362
 <212> DNA
 <213> homo sapiens

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 tgggtctgtc aaagcctata ctaactttga tgctgagcgg gatgtttga acattgaaac 180
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<210> 136
 <211> 339
 <212> PRT
 <213> homo sapiens

<400> 136
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 Phe Asp Ala Glu Arg Asp Ala Leu Asn Ile Glu Thr Ala Ile Lys Thr
 35 40 45
 Lys Gly Val Asp Glu Val Thr Ile Val Asn Ile Leu Thr Asn Arg Ser
 50 55 60
 Asn Ala Gln Arg Gln Asp Ile Ala Phe Ala Tyr Gln Arg Arg Thr Lys
 65 70 75 80
 Lys Glu Leu Ala Ser Ala Leu Lys Ser Ala Leu Ser Gly His Leu Glu
 85 90 95
 Thr Val Ile Leu Gly Leu Leu Lys Thr Pro Ala Gln Tyr Asp Ala Ser
 100 105 110
 Glu Leu Lys Ala Ser Met Lys Gly Leu Gly Thr Asp Glu Asp Ser Leu
 115 120 125

33178SEQLIST.TXT

Ile Glu Ile Ile Cys Ser Arg Thr Asn Gln Glu Leu Gln Glu Ile Asn
 130 135 140
 Arg Val Tyr Lys Glu Met Tyr Lys Thr Asp Leu Glu Lys Asp Ile Ile
 145 150 155 160
 Ser Asp Thr Ser Gly Asp Phe Arg Lys Leu Met Val Ala Leu Ala Lys
 165 170 175
 Gly Arg Arg Ala Glu Asp Gly Ser Val Ile Asp Tyr Glu Leu Ile Asp
 180 185 190
 Gln Asp Ala Arg Asp Leu Tyr Asp Ala Gly Val Lys Arg Lys Gly Thr
 195 200 205
 Asp Val Pro Lys Trp Ile Ser Ile Met Thr Glu Arg Ser Val Pro His
 210 215 220
 Leu Gln Lys Val Phe Asp Arg Tyr Lys Ser Tyr Ser Pro Tyr Asp Met
 225 230 235 240
 Leu Glu Ser Ile Arg Lys Glu Val Lys Gly Asp Leu Glu Asn Ala Phe
 245 250 255
 Leu Asn Leu Val Gln Cys Ile Gln Asn Lys Pro Leu Tyr Phe Ala Asp
 260 265 270
 Arg Leu Tyr Asp Ser Met Lys Gly Lys Gly Thr Arg Asp Lys Val Leu
 275 280 285
 Ile Arg Ile Met Val Ser Arg Ser Glu Val Asp Met Leu Lys Ile Arg
 290 295 300
 Ser Glu Phe Lys Arg Lys Tyr Gly Lys Ser Leu Tyr Tyr Tyr Ile Gln
 305 310 315 320
 Gln Asp Thr Lys Gly Asp Tyr Gln Lys Ala Leu Leu Tyr Leu Cys Gly
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 Gly Asp Asp

<210> 137
<211> 1982
<212> DNA
<213> homo sapiens

<400> 137

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catcctgcgc	tgcggcggc	gcgttaccca	gacgctggtg	tgcagagcca	catgaaggct	240
gctggggact	gggggcccagg	gagcagcaag	ccagctggga	ctgaggcgga	cgctgtctca	300
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<212> PRT
<213> homo sapiens

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35 40 45
Pro Glu Lys Cys Gln Leu Leu Phe Arg Val Ser Asp His Arg Arg Cys
50 55 60
Ser Gln Gly Glu Gly Ser Gln Val Gly Ser Leu Leu Ser Leu Thr Leu
65 70 75 80
Arg Glu Glu Phe Thr Val Leu Gly Arg Gln Val Glu Asp Ala Gly Arg
85 90 95
Val Leu Glu Gly Ile Ser Lys Ser Ile Ser Tyr Asp Leu Asp Gly Glu
100 105 110
Glu Ser Tyr Gly Lys Tyr Leu Arg Arg Glu Ser His Gln Ile Gly Asp
115 120 125
Ala Tyr Ser Asn Ser Asp Lys Ser Leu Thr Glu Leu Glu Ser Lys Phe
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Lys Gln Gly Gln Glu Gln Asp Ser Arg Gln Glu Ser Arg Leu Asn Glu
145 150 155 160
Asp Phe Leu Gly Met Leu Val His Thr Arg Ser Leu Leu Lys Glu Thr
165 170 175
Leu Asp Ile Ser Val Gly Leu Arg Asp Lys Tyr Glu Leu Leu Ala Leu
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Leu Lys Val
210

<210> 139
<211> 2574
<212> DNA
<213> homo sapiens

<400> 139
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<210> 140

<211> 412

<212> PRT

<213> homo sapiens

<400> 140

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				20				25					30				
Gly		His	Ile	Lys	Lys	Lys	Arg	Val	Glu	Ala	Ile	Arg	Gly	Gln	Ile	Leu	
				35				40					45				
Ser		Lys		Leu	Arg	Leu	Thr	Ser	Pro	Pro	Glu	Pro	Thr	Val	Met	Thr	His
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Val		Pro		Tyr	Gln	Val	Leu	Ala	Leu	Tyr	Asn	Ser	Thr	Arg	Glu	Leu	Leu
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Glu		Glu		Met	His	Gly	Glu	Arg	Glu	Glu	Gly	Cys	Thr	Gln	Glu	Asn	Thr
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Glu		Ser		Glu	Tyr	Tyr	Ala	Lys	Glu	Ile	His	Lys	Phe	Asp	Met	Ile	Gln
					100				105					110			
Gly		Leu		Ala	Glu	His	Asn	Glu	Leu	Ala	Val	Cys	Pro	Lys	Gly	Ile	Thr
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Ser		Lys		Val	Phe	Arg	Phe	Asn	Val	Ser	Ser	Val	Glu	Lys	Asn	Arg	Thr
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Asn		Leu		Phe	Arg	Ala	Glu	Phe	Arg	Val	Leu	Arg	Val	Pro	Asn	Pro	Ser
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Ser		Lys		Arg	Asn	Glu	Gln	Arg	Ile	Glu	Leu	Phe	Gln	Ile	Leu	Arg	Pro
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Asp		Glu		His	Ile	Ala	Lys	Gln	Arg	Tyr	Ile	Gly	Gly	Lys	Asn	Leu	Pro
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Thr		Arg		Gly	Thr	Ala	Glu	Trp	Leu	Ser	Phe	Asp	Val	Thr	Asp	Thr	Val
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Asn		Tyr		Cys	Phe	Arg	Asn	Leu	Glu	Glu	Asn	Cys	Cys	Val	Arg	Pro	Leu
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Asn Pro Glu Ala Ser Ala Ser Pro Cys Cys Val	Pro Gln Asp Leu Glu	
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<210> 141
<211> 3603
<212> DNA
<213> homo sapiens

<400> 141

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<210> 142

<211> 847

<212> PRT

<213> homo sapiens

<400> 142

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Glu	Gly	Ser	Pro	Lys	Ala	Ala	Gly	Tyr	Ala	Asn	Pro	Val	Trp	Thr	Ala
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Leu	Phe	Asp	Tyr	Glu	Pro	Ser	Gly	Gln	Asp	Glu	Leu	Ala	Leu	Arg	Lys
			50			55			60						
Gly	Asp	Arg	Val	Glu	Val	Leu	Ser	Arg	Asp	Ala	Ala	Ile	Ser	Gly	Asp
			65			70			75						80
Glu	Gly	Trp	Trp	Ala	Gly	Gln	Val	Gly	Gly	Gln	Val	Gly	Ile	Phe	Pro
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Ser	Asn	Tyr	Val	Ser	Arg	Gly	Gly	Pro	Pro	Pro	Cys	Glu	Val	Ala	
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Gly	Lys	Val	Tyr	Arg	Gly	Ser	Trp	Arg	Gly	Glu	Leu	Val	Ala	Val	Lys
			130			135						140			
Ala	Ala	Arg	Gln	Asp	Pro	Asp	Glu	Asp	Ile	Ser	Val	Thr	Ala	Glu	Ser
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Val	Arg	Gln	Glu	Ala	Arg	Leu	Phe	Ala	Met	Leu	Ala	His	Pro	Asn	Ile
						165						170			175
Ile	Ala	Leu	Lys	Ala	Val	Cys	Leu	Glu	Glu	Pro	Asn	Leu	Cys	Leu	Val
			180			185						190			
Met	Glu	Tyr	Ala	Ala	Gly	Gly	Pro	Leu	Ser	Arg	Ala	Leu	Ala	Gly	Arg
			195			200						205			
Arg	Val	Pro	Pro	His	Val	Leu	Val	Asn	Trp	Ala	Val	Gln	Ile	Ala	Arg
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Gly	Met	His	Tyr	Leu	His	Cys	Glu	Ala	Leu	Val	Pro	Val	Ile	His	Arg
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Asp	Leu	Lys	Ser	Asn	Asn	Ile	Leu	Leu	Gln	Pro	Ile	Glu	Ser	Asp	
						245						250			255
Asp	Met	Glu	His	Lys	Thr	Leu	Lys	Ile	Thr	Asp	Phe	Gly	Leu	Ala	Arg
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Pro	Tyr	Arg	Gly	Ile	Asp	Cys	Leu	Ala	val	Ala	Tyr	Gly	Val	Ala	Val
						325						330			335
Asn	Lys	Leu	Thr	Leu	Pro	Ile	Pro	Ser	Thr	Cys	Pro	Glu	Pro	Phe	Ala
						340						345			350
Gln	Leu	Met	Ala	Asp	Cys	Trp	Ala	Gln	Asp	Pro	His	Arg	Arg	Pro	Asp
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Phe	Ala	Ser	Ile	Leu	Gln	Gln	Leu	Glu	Ala	Leu	Glu	Ala	Gln	Val	Leu
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Arg	Glu	Met	Pro	Arg	Asp	Ser	Phe	His	Ser	Met	Gln	Glu	Gly	Trp	Lys

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Leu Leu Ser Arg Glu Glu Glu Leu Thr Arg Ala Ala Arg Glu Gln Arg	420	425	430
Ser Gln Ala Glu Gln Leu Arg Arg Arg Glu His Leu Leu Ala Gln Trp	435	440	445
Glu Leu Glu Val Phe Glu Arg Glu Leu Thr Leu Leu Gln Gln Val	450	455	460
Asp Arg Glu Arg Pro His Val Arg Arg Arg Arg Gly Thr Phe Lys Arg	465	470	475
Ser Lys Leu Arg Ala Arg Asp Gly Gly Glu Arg Ile Ser Met Pro Leu	485	490	495
Asp Phe Lys His Arg Ile Thr Val Gln Ala Ser Pro Gly Leu Asp Arg	500	505	510
Arg Arg Asn Val Phe Glu Val Gly Pro Gly Asp Ser Pro Thr Phe Pro	515	520	525
Arg Phe Arg Ala Ile Gln Leu Glu Pro Ala Glu Pro Gly Gln Ala Trp	530	535	540
Gly Arg Gln Ser Pro Arg Arg Leu Glu Asp Ser Ser Asn Gly Glu Arg	545	550	555
Arg Ala Cys Trp Ala Trp Gly Pro Ser Ser Pro Lys Pro Gly Glu Ala	565	570	575
Gln Asn Gly Arg Arg Arg Ser Arg Met Asp Glu Ala Thr Trp Tyr Leu	580	585	590
Asp Ser Asp Asp Ser Ser Pro Leu Gly Ser Pro Ser Thr Pro Pro Ala	595	600	605
Leu Asn Gly Asn Pro Pro Arg Pro Ser Leu Glu Pro Glu Glu Pro Lys	610	615	620
Arg Pro Val Pro Ala Glu Arg Gly Ser Ser Ser Gly Thr Pro Lys Leu	625	630	635
Ile Gln Arg Ala Leu Leu Arg Gly Thr Ala Leu Leu Ala Ser Leu Gly	645	650	655
Leu Gly Arg Asp Leu Gln Pro Pro Gly Gly Pro Gly Arg Glu Arg Gly	660	665	670
Glu Ser Pro Thr Thr Pro Pro Thr Pro Ala Pro Cys Pro Thr	675	680	685
Glu Pro Pro Pro Ser Pro Leu Ile Cys Phe Ser Leu Lys Thr Pro Asp	690	695	700
Ser Pro Pro Thr Pro Ala Pro Leu Leu Leu Asp Leu Gly Ile Pro Val	705	710	715
Gly Gln Arg Ser Ala Lys Ser Pro Arg Arg Glu Glu Glu Pro Arg Gly	725	730	735
Gly Thr Val Ser Pro Pro Gly Thr Ser Arg Ser Ala Pro Gly Thr	740	745	750
Pro Gly Thr Pro Arg Ser Pro Pro Leu Gly Leu Ile Ser Arg Pro Arg	755	760	765
Pro Ser Pro Leu Arg Ser Arg Ile Asp Pro Trp Ser Phe Val Ser Ala	770	775	780
Gly Pro Arg Pro Ser Pro Leu Pro Ser Pro Gln Pro Ala Pro Arg Arg	785	790	795
Ala Pro Trp Thr Leu Phe Pro Asp Ser Asp Pro Phe Trp Asp Ser Pro	805	810	815
Pro Ala Asn Pro Phe Gln Gly Gly Pro Gln Asp Cys Arg Ala Gln Thr	820	825	830
Lys Asp Met Gly Ala Gln Ala Pro Trp Val Pro Glu Ala Gly Pro	835	840	845

<210> 143
<211> 1571
<212> DNA
<213> homo sapiens

<400> 143
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gagctgcccg actgggccgc cgccaaagag ttttaccaga agtacgaccc taaggacgtc 180

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tttgcggta	agattatgga	agtgcacagct	gagcggctga	gtcctgagca	gctggaggag	300
gtgcggaaag	ccacacggcg	agagacacac	atcccttcgccc	aggtcgcccc	ccaccccccac	360
atcatcaccc	tcatcgattc	ctacgagtc	tctagcttca	tgttcctgg	gttgacactg	420
atgcggagg	gagagctgtt	tgactatctc	acagagaagg	tggccctctc	tgaaaaaggaa	480
accaggatcca	tcatgcggtc	tctgctggaa	gcagttagct	ttctccatgc	caacaacatt	540
gtgcatacgag	atctgaagcc	cgagaatatt	ctccttagatg	acaatatgca	gatccgactt	600
tcagatttcg	ggttctctcg	ccacttggaa	cctggcaga	agcttcgaga	gttgtgtggg	660
acccagggt	atctagcgcc	agagatcctt	aatgtctca	tggatgaaac	ccacccaggc	720
tatggcaagg	aggtcgacct	ctgggcctgt	gggggtatct	tgttcacact	cctggctggc	780
tcgccaccct	tctggcaccg	gcggcagatc	ctgatgttac	gcatgatcat	ggagggccag	840
taccagttca	gttccccca	gtgggatgac	cgttccagca	ctgtcaaaga	cctgatctcc	900
aggctgctgc	agggtggatcc	tgaggcacgc	ctgacagctg	agcaggccct	acagcacccc	960
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gtggcagtgt	ggacagtgt	ggctgctgg	cgagtggccc	taagcaccca	tcgtgtacgg	1080
ccactgacca	agaatgcact	gttggggac	ccttatgcgc	tgcggtcagt	gcggcacctc	1140
atcgacaact	tgcccttcg	gcttacggg	cactgggtaa	agaaagggg	gcagcagaac	1200
cggccggctc	tctttcagca	ccggccccct	gggcctttc	ccatcatggg	ccctgaagag	1260
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<210> 144

<211> 406

<212> PRT

<213> homo sapiens

<400> 144

Met	Thr	Leu	Asp	Val	Gly	Pro	Glu	Asp	Glu	Leu	Pro	Asp	Trp	Ala	Ala
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Ala	Lys	Glu	Phe	Tyr	Gln	Lys	Tyr	Asp	Pro	Lys	Asp	Val	Ile	Gly	Arg
						20			25			30			
Gly	Val	Ser	Ser	Val	Val	Arg	Arg	Cys	Val	His	Arg	Ala	Thr	Gly	His
						35		40		45					
Glu	Phe	Ala	Val	Lys	Ile	Met	Glu	Val	Thr	Ala	Glu	Arg	Leu	Ser	Pro
						50		55		60					
Glu	Gln	Leu	Glu	Glu	Val	Arg	Glu	Ala	Thr	Arg	Arg	Glu	Thr	His	Ile
						65		70		75		80			
Leu	Arg	Gln	Val	Ala	Gly	His	Pro	His	Ile	Ile	Thr	Leu	Ile	Asp	Ser
						85		90			95				
Tyr	Glu	Ser	Ser	Phe	Met	Phe	Leu	Val	Phe	Asp	Leu	Met	Arg	Lys	
						100		105			110				
Gly	Glu	Leu	Phe	Asp	Tyr	Leu	Thr	Glu	Lys	Val	Ala	Leu	Ser	Glu	Lys
						115		120			125				
Glu	Thr	Arg	Ser	Ile	Met	Arg	Ser	Leu	Leu	Glu	Ala	Val	Ser	Phe	Leu
						130		135			140				
His	Ala	Asn	Asn	Ile	Val	His	Arg	Asp	Leu	Lys	Pro	Glu	Asn	Ile	Leu
						145		150			155			160	
Leu	Asp	Asp	Asn	Met	Gln	Ile	Arg	Leu	Ser	Asp	Phe	Gly	Phe	Ser	Cys
						165		170			175				
His	Leu	Glu	Pro	Gly	Glu	Lys	Leu	Arg	Glu	Leu	Cys	Gly	Thr	Pro	Gly
						180		185			190				
Tyr	Leu	Ala	Pro	Glu	Ile	Leu	Lys	Cys	Ser	Met	Asp	Glu	Thr	His	Pro
						195		200			205				
Gly	Tyr	Gly	Lys	Glu	Val	Asp	Leu	Trp	Ala	Cys	Gly	Val	Ile	Leu	Phe
						210		215			220				
Thr	Leu	Leu	Ala	Gly	Ser	Pro	Pro	Phe	Trp	His	Arg	Arg	Gln	Ile	Leu
						225		230			235			240	
Met	Leu	Arg	Met	Ile	Met	Glu	Gly	Gln	Tyr	Gln	Phe	Ser	Ser	Pro	Glu
						245		250			255				
Trp	Asp	Asp	Arg	Ser	Ser	Thr	Val	Lys	Asp	Leu	Ile	Ser	Arg	Leu	Leu
						260		265			270				
Gln	Val	Asp	Pro	Glu	Ala	Arg	Leu	Thr	Ala	Glu	Gln	Ala	Leu	Gln	His
						275		280			285				
Pro	Phe	Phe	Glu	Arg	Cys	Glu	Gly	Ser	Gln	Pro	Trp	Asn	Leu	Thr	Pro

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290	295	300
Arg Gln Arg Phe Arg Val Ala Val Trp Thr Val Leu Ala Ala Gly Arg		
305	310	315
Val Ala Leu Ser Thr His Arg Val Arg Pro Leu Thr Lys Asn Ala Leu		
325	330	335
Leu Arg Asp Pro Tyr Ala Leu Arg Ser Val Arg His Leu Ile Asp Asn		
340	345	350
Cys Ala Phe Arg Leu Tyr Gly His Trp Val Lys Lys Gly Glu Gln Gln		
355	360	365
Asn Arg Ala Ala Leu Phe Gln His Arg Pro Pro Gly Pro Phe Pro Ile		
370	375	380
Met Gly Pro Glu Glu Glu Gly Asp Ser Ala Ala Ile Thr Glu Asp Glu		
385	390	395
Ala val Leu Val Leu Gly		
405		

<210> 145

<211> 952

<212> DNA

<213> homo sapiens

<400> 145

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gaatcaggct	tcacacctaa	ggacacccat	ctaaggcatt	ttaaccctcg	ggattaccta	180
gaaaaatatt	acaagtttgg	ttcttaggcac	tctgcagaaa	gccagattct	taagcacctt	240
ctgaaaatc	tttcaagat	attctgccta	gacggtgtga	agggagacct	gctgattgac	300
atcgctctg	gccccactat	ctatcagctc	ctctctgctt	gtgaatcctt	taaggagatc	360
gtcgtcaactg	actactcaga	ccagaacctg	caggagctgg	agaagtggct	gaagaaagag	420
ccagaggcct	ttgactgtc	cccagtggtg	acctatgtgt	gtgatcttga	agggAACAGA	480
gtcaagggtc	cagagaagga	ggagaagttt	agacaggcgg	tcaagcagg	gctgaagtgt	540
gatgtgactc	agagccagcc	actggggggcc	gtcccccattac	ccccggctga	ctgcgtgctc	600
agcacactgt	gtctggatgc	cgcctgcccc	gacctcccca	cctactgcag	ggcgtcagg	660
aacctcggca	gcctactgaa	gccagggggc	ttcctggtga	tcatggatgc	gctcaagagc	720
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gaggctgctg	tgaaagagggc	tggctacaca	atcgaatgtt	ttgaggttat	ctcgaaagt	840
tatttttcca	ccatggccaa	caacgaagga	cttttctccc	ttgtggcggag	gaagctgagc	900
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<210> 146

<211> 264

<212> PRT

<213> homo sapiens

<400> 146

Met Glu Ser Gly Phe Thr Ser Lys Asp Thr Tyr Leu Ser His Phe Asn			
1	5	10	15
Pro Arg Asp Tyr Leu Glu Lys Tyr Tyr Lys Phe Gly Ser Arg His Ser			
20	25	30	
Ala Glu Ser Gln Ile Leu Lys His Leu Leu Lys Asn Leu Phe Lys Ile			
35	40	45	
Phe Cys Leu Asp Gly Val Lys Gly Asp Leu Leu Ile Asp Ile Gly Ser			
50	55	60	
Gly Pro Thr Ile Tyr Gln Leu Leu Ser Ala Cys Glu Ser Phe Lys Glu			
65	70	75	80
Ile val Val Thr Asp Tyr Ser Asp Gln Asn Leu Gln Glu Leu Glu Lys			
85	90	95	
Trp Leu Lys Glu Pro Glu Ala Phe Asp Trp Ser Pro Val Val Thr			
100	105	110	
Tyr Val Cys Asp Leu Glu Gly Asn Arg Val Lys Gly Pro Glu Lys Glu			
115	120	125	
Glu Lys Leu Arg Gln Ala Val Lys Gln Val Leu Lys Cys Asp Val Thr			
130	135	140	
Gln Ser Gln Pro Leu Gly Ala Val Pro Leu Pro Pro Ala Asp Cys Val			
145	150	155	160
Leu Ser Thr Leu Cys Leu Asp Ala Ala Cys Pro Asp Leu Pro Thr Tyr			
165	170	175	

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Cys	Arg	Ala	Leu	Arg	Asn	Leu	Gly	Ser	Leu	Leu	Lys	Pro	Gly	Gly	Phe
180							185				190				
Leu	Val	Ile	Met	Asp	Ala	Leu	Lys	Ser	Ser	Tyr	Tyr	Met	Ile	Gly	Glu
195							200				205				
Gln	Lys	Phe	Ser	Ser	Leu	Pro	Leu	Gly	Arg	Glu	Ala	Val	Glu	Ala	Ala
210						215				220					
Val	Lys	Glu	Ala	Gly	Tyr	Thr	Ile	Glu	Trp	Phe	Glu	Val	Ile	Ser	Gln
225					230			235			240				
Ser	Tyr	Ser	Ser	Thr	Met	Ala	Asn	Asn	Glu	Gly	Leu	Phe	Ser	Leu	Val
245					250				255						
Ala	Arg	Lys	Leu	Ser	Arg	Pro	Leu								
260															

<210> 147
<211> 830
<212> DNA
<213> homo sapiens

<400> 147

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ccacgatgag	atgttctccg	acatctacaa	gatccggag	atcgcggacg	ggttgtgcct	180
ggaggtggag	gggaagatgg	tcaatggac	agaaggttaac	attgtatgact	cgctcattgg	240
tggaaatgcc	tccgctgaag	gcccggagg	cgaaggtaacc	gaaaggcacag	taatcactgg	300
tgtcgatatt	gtcatgaacc	atcacctgca	ggaaacaagt	tgcacaaaat	aagcttacaa	360
gaaatgatc	aaagattaca	tgaatcaat	caaaggaaaa	tttgaagaac	agagaccaga	420
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caaaaactac	cagttctta	tttgtgaaaa	catgaatcca	gatggcatgg	ttgctctatt	540
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gctcttcatt	tattttgact	gtgattttt	tggagtgag	gcattgtttt	taagaaaaac	780
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<210> 148
<211> 172
<212> PRT
<213> homo sapiens

<400> 148

Met	Ile	Ile	Tyr	Arg	Asp	Leu	Ile	Ser	His	Asp	Glu	Met	Phe	Ser	Asp
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Ile	Tyr	Lys	Ile	Arg	Glu	Ile	Ala	Asp	Gly	Leu	Cys	Leu	Glu	Val	Glu
						20		25		30					
Gly	Lys	Met	Val	Ser	Arg	Thr	Glu	Gly	Asn	Ile	Asp	Asp	Ser	Leu	Ile
						35		40		45					
Gly	Gly	Asn	Ala	Ser	Ala	Glu	Gly	Pro	Glu	Gly	Glu	Gly	Thr	Glu	Ser
						50		55		60					
Thr	Val	Ile	Thr	Gly	Val	Asp	Ile	Val	Met	Asn	His	His	Leu	Gln	Glu
						65		70		75		80			
Thr	Ser	Phe	Thr	Lys	Glu	Ala	Tyr	Lys	Tyr	Ile	Lys	Asp	Tyr	Met	
						85		90		95					
Lys	Ser	Ile	Lys	Gly	Lys	Leu	Glu	Glu	Gln	Arg	Pro	Glu	Arg	Val	Lys
						100		105		110					
Pro	Phe	Met	Thr	Gly	Ala	Ala	Glu	Gln	Ile	Lys	His	Ile	Leu	Ala	Asn
						115		120		125					
Phe	Lys	Asn	Tyr	Gln	Phe	Phe	Ile	Gly	Glu	Asn	Met	Asn	Pro	Asp	Gly
						130		135		140					
Met	Val	Ala	Leu	Leu	Asp	Tyr	Arg	Glu	Asp	Gly	Val	Thr	Pro	Tyr	Met
145						145		150		155		160			
Ile	Phe	Phe	Lys	Asp	Gly	Leu	Glu	Met	Glu	Lys	Cys				
						165		170							

<210> 149
<211> 2077
<212> DNA

<213> homo sapiens

<400> 149

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tccctgtaga	gctgaacaca	gtctatttc	ttggggccca	taatattct	aatgcaaata	480
tgaatgaaga	tggcccttcc	atgtctgtga	atttacacc	accaggctgc	ctagaccaca	540
taatgaataa	taaaaaaaag	tgtgtcaagg	ccggaagcct	gtgggatccg	aacatcactg	600
cttgtaagaa	gaatgaggag	acagtagaaag	tgaacttcac	aaccactccc	ctgggaaaca	660
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aaaagtggca	aaaaaaagaaa	atagcagaga	tgggtccagt	gcagtggctt	gccactcaaa	1200
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ccttaaacat	tttctgcagt	gatctaagaa	gccagattca	tctgcacaaa	tacgtgggtg	1380
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<210> 150

<211> 502

<212> PRT

<213> homo sapiens

<400> 150

Met	Ser	Leu	Val	Leu	Leu	Ser	Leu	Ala	Ala	Leu	Cys	Arg	Ser	Ala	Val
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Pro	Arg	Glu	Pro	Thr	Val	Gln	Cys	Gly	Ser	Glu	Thr	Gly	Pro	Ser	Pro
						20			25				30		
Glu	Trp	Met	Leu	Gln	His	Asp	Leu	Ile	Pro	Gly	Asp	Leu	Arg	Asp	Leu
						35			40			45			
Arg	Val	Glu	Pro	Val	Thr	Thr	Ser	Val	Ala	Thr	Gly	Asp	Tyr	Ser	Ile
						50			55			60			
Leu	Met	Asn	Val	Ser	Trp	Val	Leu	Arg	Ala	Asp	Ala	Ser	Ile	Arg	Leu
						65			70			75			80
Leu	Lys	Ala	Thr	Lys	Ile	Cys	Val	Thr	Gly	Lys	Ser	Asn	Phe	Gln	Ser
						85			90			95			
Tyr	Ser	Cys	Val	Arg	Cys	Asn	Tyr	Thr	Glu	Ala	Phe	Gln	Thr	Gln	Thr
						100			105			110			
Arg	Pro	Ser	Gly	Gly	Lys	Trp	Thr	Phe	Ser	Tyr	Ile	Gly	Phe	Pro	Val
						115			120			125			
Glu	Leu	Asn	Thr	val	Tyr	Phe	Ile	Gly	Ala	His	Asn	Ile	Pro	Asn	Ala
						130			135			140			
Asn	Met	Asn	Glu	Asp	Gly	Pro	Ser	Met	Ser	Val	Asn	Phe	Thr	Ser	Pro
						145			150			155			160
Gly	Cys	Leu	Asp	His	Ile	Met	Lys	Tyr	Lys	Lys	Lys	Cys	Val	Lys	Ala
						165			170			175			
Gly	Ser	Leu	Trp	Asp	Pro	Asn	Ile	Thr	Ala	Cys	Lys	Lys	Asn	Glu	Glu

33178SEQLIST.TXT

180	185	190
Thr Val Glu Val Asn Phe Thr Thr	Thr Pro Leu Gly Asn Arg Tyr Met	
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Ala Leu Ile Gln His Ser Thr Ile Ile Gly Phe Ser Gln Val Phe Glu		
210	210	210
Pro His Gln Lys Lys Gln Thr Arg Ala Ser Val Val Ile Pro Val Thr		
225	225	225
Gly Asp Ser Glu Gly Ala Thr Val Gln Leu Thr Pro Tyr Phe Pro Thr		
240	240	240
Cys Gly Ser Asp Cys Ile Arg His Lys Gly Thr Val Val Leu Cys Pro		
255	255	255
Gln Thr Gly Val Pro Phe Pro Leu Asp Asn Asn Lys Ser Lys Pro Gly		
270	270	270
Gly Trp Leu Pro Leu Leu Leu Ser Leu Leu Val Ala Thr Trp Val		
285	285	285
Leu Val Ala Gly Ile Tyr Leu Met Trp Arg His Glu Arg Ile Lys Lys		
300	300	300
315	315	315
Thr Ser Phe Ser Thr Thr Leu Leu Pro Pro Ile Lys Val Leu Val		
330	330	330
345	345	345
360	360	360
375	375	375
Gln Lys Lys Ile Ala Glu Met Gly Pro Val Gln Trp Leu Ala Thr		
380	380	380
Gln Lys Lys Ala Ala Asp Lys Val Val Phe Leu Leu Ser Asn Asp Val		
395	395	395
400	400	400
Asn Ser Val Cys Asp Gly Thr Cys Gly Lys Ser Glu Gly Ser Pro Ser		
415	415	415
420	420	420
425	425	425
430	430	430
Asp Leu Arg Ser Gln Ile His Leu His Lys Tyr Val Val Val Tyr Phe		
435	435	435
440	440	440
445	445	445
Arg Glu Ile Asp Thr Lys Asp Asp Tyr Asn Ala Leu Ser Val Cys Pro		
450	450	450
455	455	455
460	460	460
Lys Tyr His Leu Met Lys Asp Ala Thr Ala Phe Cys Ala Glu Leu Leu		
465	465	465
470	470	470
475	475	475
480	480	480
His Val Lys Gln Gln Val Ser Ala Gly Lys Arg Ser Gln Ala Cys His		
485	485	485
490	490	490
495	495	495
Asp Gly Cys Cys Ser Leu		
500		

<210> 151

<211> 772

<212> DNA

<213> homo sapiens

<400> 151

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tcatgtatct cctaattgcct tacactactt ggtttctgtat ttgctctatt tcagcagatc 660
tttctaccta ctttgggtat caaaaaagaa gagttaaaac aacacatgtat aatgcctttt 720
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<210> 152

<211> 148

<212> PRT

<213> homo sapiens

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<400> 152

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 35 40 45
 Thr Lys Val Ala Val Asp Glu Asn Lys Ala Lys Glu Phe Leu Gly Ser
 50 55 60
 Leu Lys Arg Gln Lys Arg Gln Leu Trp Asp Arg Thr Arg Pro Glu Val
 65 70 75 80
 Gln Gln Trp Tyr Gln Gln Phe Leu Tyr Met Gly Phe Asp Glu Ala Lys
 85 90 95
 Phe Glu Asp Asp Ile Thr Tyr Trp Leu Asn Arg Asp Arg Asn Gly His
 100 105 110
 Glu Tyr Tyr Gly Asp Tyr Tyr Gln Arg His Tyr Asp Glu Asp Ser Ala
 115 120 125
 Ile Gly Pro Arg Ser Pro Tyr Gly Phe Arg His Gly Ala Ser Val Asn
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 Tyr Asp Asp Tyr
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<210> 153

<211> 2526

<212> DNA

<213> homo sapiens

<400> 153

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<212> PRT
<213> homo sapiens

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 35 40 45
 Thr Val Pro Thr Gly Tyr Arg Val Lys Leu Val Phe Gln Gln Phe Asp
 50 55 60
 Leu Glu Pro Ser Glu Gly Cys Phe Tyr Asp Tyr Val Lys Ile Ser Ala
 65 70 75 80
 Asp Lys Lys Ser Leu Gly Arg Phe Cys Gly Gln Leu Gly Ser Pro Leu
 85 90 95
 Gly Asn Pro Pro Gly Lys Lys Glu Phe Met Ser Gln Gly Asn Lys Met
 100 105 110
 Leu Leu Thr Phe His Thr Asp Phe Ser Asn Glu Glu Asn Gly Thr Ile
 115 120 125
 Met Phe Tyr Lys Gly Phe Leu Ala Tyr Tyr Gln Ala Val Asp Leu Asp
 130 135 140
 Glu Cys Ala Ser Arg Ser Lys Leu Gly Glu Glu Asp Pro Gln Pro Gln
 145 150 155 160
 Cys Gln His Leu Cys His Asn Tyr Val Gly Gly Tyr Phe Cys Ser Cys
 165 170 175
 Arg Pro Gly Tyr Glu Leu Gln Glu Asp Arg His Ser Cys Gln Ala Glu
 180 185 190
 Cys Ser Ser Glu Leu Tyr Thr Glu Ala Ser Gly Tyr Ile Ser Ser Leu
 195 200 205
 Glu Tyr Pro Arg Ser Tyr Pro Pro Asp Leu Arg Cys Asn Tyr Ser Ile
 210 215 220
 Arg Val Glu Arg Gly Leu Thr Leu His Leu Lys Phe Leu Glu Pro Phe
 225 230 235 240
 Asp Ile Asp Asp His Gln Gln Val His Cys Pro Tyr Asp Gln Leu Gln
 245 250 255
 Ile Tyr Ala Asn Gly Lys Asn Ile Gly Glu Phe Cys Gly Lys Gln Arg
 260 265 270
 Pro Pro Asp Leu Asp Thr Ser Ser Asn Ala Val Asp Leu Leu Phe Phe
 275 280 285
 Thr Asp Glu Ser Gly Asp Ser Arg Gly Trp Lys Leu Arg Tyr Thr Thr
 290 295 300
 Glu Ile Ile Lys Cys Pro Gln Pro Lys Thr Leu Asp Glu Phe Thr Ile
 305 310 315 320
 Ile Gln Asn Leu Gln Pro Gln Tyr Gln Phe Arg Asp Tyr Phe Ile Ala
 325 330 335
 Thr Cys Lys Gln Gly Tyr Gln Leu Ile Glu Gly Asn Gln Val Leu His
 340 345 350
 Ser Phe Thr Ala Val Cys Gln Asp Asp Gly Thr Trp His Arg Ala Met
 355 360 365
 Pro Arg Cys Lys Ile Lys Asp Cys Gly Gln Pro Arg Asn Leu Pro Asn
 370 375 380
 Gly Asp Phe Arg Tyr Thr Thr Met Gly Val Asn Thr Tyr Lys Ala
 385 390 395 400
 Arg Ile Gln Tyr Tyr Cys His Glu Pro Tyr Tyr Lys Met Gln Thr Arg
 405 410 415
 Ala Gly Ser Arg Glu Ser Glu Gln Gly Val Tyr Thr Cys Thr Ala Gln
 420 425 430
 Gly Ile Trp Lys Asn Glu Gln Lys Gly Glu Lys Ile Pro Arg Cys Leu
 435 440 445
 Pro Val Cys Gly Lys Pro Val Asn Pro Val Glu Gln Arg Gln Arg Ile

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465	480	485
Thr Asn Ile His Gly Arg Gly Gly Ala Leu Leu Gly Asp Arg Trp	490	495
485	495	500
Ile Leu Thr Ala Ala His Thr Leu Tyr Pro Lys Glu His Glu Ala Gln	505	510
500	510	515
Ser Asn Ala Ser Leu Asp Val Phe Leu Gly His Thr Asn Val Glu Glu	520	525
515	525	530
Leu Met Lys Leu Gly Asn His Pro Ile Arg Arg Val Ser Val His Pro	535	540
530	540	545
Asp Tyr Arg Gln Asp Glu Ser Tyr Asn Phe Glu Gly Asp Ile Ala Leu	550	555
545	555	560
Leu Glu Leu Glu Asn Ser Val Thr Leu Gly Pro Asn Leu Leu Pro Ile	565	570
565	570	575
Cys Leu Pro Asp Asn Asp Thr Phe Tyr Asp Leu Gly Leu Met Gly Tyr	580	585
580	585	590
Val Ser Gly Phe Gly Val Met Glu Glu Lys Ile Ala His Asp Leu Arg	595	600
595	600	605
Phe Val Arg Leu Pro Val Ala Asn Pro Gln Ala Cys Glu Asn Trp Leu	610	615
610	615	620
Arg Gly Lys Asn Arg Met Asp Val Phe Ser Gln Asn Met Phe Cys Ala	625	630
625	630	635
Gly His Pro Ser Leu Lys Gln Asp Ala Cys Gln Gly Asp Ser Gly Gly	645	650
645	650	655
Val Phe Ala Val Arg Asp Pro Asn Thr Asp Arg Trp Val Ala Thr Gly	660	665
660	665	670
Ile Val Ser Trp Gly Ile Gly Cys Ser Arg Gly Tyr Gly Phe Tyr Thr	675	680
675	680	685
Lys Val Leu Asn Tyr Val Asp Trp Ile Lys Lys Glu Met Glu Glu Glu	690	695
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Asp		
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<212> DNA
<213> homo sapiens

<400> 155

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ttcACACCAg aaaACTATAA gaggATAGAG gcaATTGTAa aaaACTATCC agaAGGCCAT 240
aaAGCAGCAG ctgttCTTCC agtCCTGGAT ttAGCCAAA ggcAGAAATGG gtggTTGCC 300
atCTCTGCTA tgaACAAAGGT tgcAGAAAGTt ttacaAGTAC ctccaATGAG agtATATGAA 360
gtAGCAACTT ttTATACAAAT gtATAATCGA aAGCCAGTTT gaaAGTATCA cattcAGGTC 420
tgcACTACTA caccCTGcat gcttcgAAAC tctgACAGCA tactGGAGGC cattcAGAAA 480
aAGCTTGGAA taaAGGTGG ggAGACTACA cctgACAAAC ttttCactCT tatAGAAGTG 540
gaATGTTAG gggCCTGTGT gaACGCACCA atggTTCAAa taaATGACAA ttACTATGAG 600
gATTGACAG ctaAGGATAT tgaAGAAATT attGATGAGC tcaAGGCTGG caAAATCCCA 660
aaACCAGGGC caAGGAGTGG acgCTTCTCT tGTGAGGCCAG ctggAGGTCT tacCTTTG 720
actGAACCAC ccaAGGGACC tggATTGGT gtacaAGCAG gcCTTAAATT tatATTGAAC 780
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<211> 249
<212> PRT
<213> homo sapiens

<400> 156

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Gly Ala Gly Gly Ala Leu Phe Val His Arg Asp Thr Pro Glu Asn Asn	35	40	45	

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Pro Asp Thr Pro Phe Asp Phe Thr Pro Glu Asn Tyr Lys Arg Ile Glu
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 Ala Ile Val Lys Asn Tyr Pro Glu Gly His Lys Ala Ala Ala Val Leu
 65 70 75 80
 Pro Val Leu Asp Leu Ala Gln Arg Gln Asn Gly Trp Leu Pro Ile Ser
 85 90 95
 Ala Met Asn Lys Val Ala Glu Val Leu Gln Val Pro Pro Met Arg Val
 100 105 110
 Tyr Glu Val Ala Thr Phe Tyr Thr Met Tyr Asn Arg Lys Pro Val Gly
 115 120 125
 Lys Tyr His Ile Gln Val Cys Thr Thr Thr Pro Cys Met Leu Arg Asn
 130 135 140
 Ser Asp Ser Ile Leu Glu Ala Ile Gln Lys Lys Leu Gly Ile Lys Val
 145 150 155 160
 Gly Glu Thr Thr Pro Asp Lys Leu Phe Thr Leu Ile Glu Val Glu Cys
 165 170 175
 Leu Gly Ala Cys Val Asn Ala Pro Met Val Gln Ile Asn Asp Asn Tyr
 180 185 190
 Tyr Glu Asp Leu Thr Ala Lys Asp Ile Glu Glu Ile Ile Asp Glu Leu
 195 200 205
 Lys Ala Gly Lys Ile Pro Lys Pro Gly Pro Arg Ser Gly Arg Phe Ser
 210 215 220
 Cys Glu Pro Ala Gly Gly Leu Thr Ser Leu Thr Glu Pro Pro Lys Gly
 225 230 235 240
 Pro Gly Phe Gly Val Gln Ala Gly Leu
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<210> 157

<211> 2020

<212> DNA

<213> homo sapiens

<400> 157

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<400> 158
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35 40 45
Leu Ala Lys Gln Cys Gln Leu Trp Asp Leu Leu Ser Asp Leu Glu Ala
50 55 60
Lys Cys Glu Lys Val Ser Glu Phe Val Ala Ser Lys Pro Gly Thr Cys
65 70 75 80
Val Lys Val Leu Thr Ile Glu Pro Pro Ala Asp Pro Arg Leu Arg
85 90 95
Glu Asp Met Ala Leu Leu Ala Asp Cys Ala Leu Pro Pro Glu Leu Arg
100 105 110
Gly Asp Leu Trp Glu Leu Pro Phe Pro Cys Pro Asp Gly Phe Asn Ser
115 120 125
Cys Pro Asp Ile Cys Phe Arg Val Ala Gly Cys Ser Phe Leu Cys His
130 135 140
Lys Ala Phe Phe Cys Gly Arg Ser Asp Tyr Phe Arg Ala Leu Leu Asp
145 150 155 160
Asp His Phe Arg Glu Ser Glu Glu Pro Ala Thr Ser Gly Gly Pro Pro
165 170 175
Ala Val Thr Leu His Gly Ile Ser Pro Asp Val Phe Thr His Val Leu
180 185 190
Tyr Tyr Met Tyr Ser Asp His Thr Glu Leu Ser Pro Glu Ala Ala Tyr
195 200 205
Asp Val Leu Ser Val Ala Asp Met Tyr Leu Leu Pro Gly Leu Lys Arg
210 215 220
Leu Cys Gly Arg Ser Leu Ala Gln Met Leu Asp Glu Asp Thr Val Val
225 230 235 240
Gly Val Trp Arg Val Ala Lys Leu Phe Arg Leu Ala Arg Leu Glu Asp
245 250 255
Gln Cys Thr Glu Tyr Met Ala Lys Val Ile Glu Lys Leu Val Glu Arg
260 265 270
Glu Asp Phe Val Glu Ala Val Lys Glu Glu Ala Ala Ala Val Ala Ala
275 280 285
Arg Gln Glu Thr Asp Ser Ile Pro Leu Val Asp Asp Ile Arg Phe His
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<210> 160
<211> 538
<212> PRT
<213> homo sapiens

<400> 160						
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20	25	30				
Cys Ser Pro Gly Leu Ser Cys Arg	Leu Trp Asp Ser Asp Ile Leu Cys					
35	40	45				
Leu Pro Gly Asp Ile Val Pro Ala Pro	Gly Pro Val Leu Ala Pro Thr					
50	55	60				
His Leu Gln Thr Glu Leu Val Leu Arg	Cys Gln Lys Glu Thr Asp Cys					
65	70	75	80			
Asp Leu Cys Leu Arg Val Ala Val His	Leu Ala Val His Gly His Trp					
85	90	95				
Glu Glu Pro Glu Asp Glu Glu Lys	Phe Gly Gly Ala Ala Asp Ser Gly					
100	105	110				
Val Glu Glu Pro Arg Asn Ala Ser	Leu Gln Ala Gln Val Val Leu Ser					
115	120	125				
Phe Gln Ala Tyr Pro Thr Ala Arg Cys	Val Leu Leu Glu Val Gln Val					
130	135	140				
Pro Ala Ala Leu Val Gln Phe Gly Gln	Ser Val Gly Ser Val Val Tyr					
145	150	155	160			
Asp Cys Phe Glu Ala Ala Leu Gly Ser	Glu Val Arg Ile Trp Ser Tyr					
165	170	175				
Thr Gln Pro Arg Tyr Glu Lys Glu Leu	Asn His Thr Gln Gln Leu Pro					
180	185	190				
Ala Leu Pro Trp Leu Asn Val Ser	Ala Asp Gly Asp Asn Val His Leu					
195	200	205				
Val Leu Asn Val Ser Glu Glu Gln His	Phe Gly Leu Ser Leu Tyr Trp					
210	215	220				
Asn Gln Val Gln Gly Pro Pro Lys	Pro Arg Trp His Lys Asn Leu Thr					

33178SEQLIST.TXT

225	230	235	240
Gly Pro Gln Ile Ile	Thr Leu Asn His	Thr Asp Leu Val	Pro Cys Leu
245	250	255	
Cys Ile Gln Val Trp Pro	Leu Glu Pro Asp Ser	Val Arg Thr Asn Ile	
260	265	270	
Cys Pro Phe Arg Glu Asp Pro	Arg Ala His Gln Asn	Leu Trp Gln Ala	
275	280	285	
Ala Arg Leu Arg Leu Leu	Thr Leu Gln Ser	Trp Leu Leu Asp Ala Pro	
290	295	300	
Cys Ser Leu Pro Ala Glu Ala Ala	Leu Cys Trp Arg Ala Pro	Gly Gly	
305	310	315	320
Asp Pro Cys Gln Pro Leu Val Pro	Leu Ser Trp Glu Asn Val	Thr	
325	330	335	
val Asp Lys Val Leu Glu Phe Pro	Leu Leu Lys Gly His	Pro Asn Leu	
340	345	350	
Cys Val Gln Val Asn Ser Ser	Glu Lys Leu Gln Leu	Gln Glu Cys Leu	
355	360	365	
Trp Ala Asp Ser Leu Gly	Pro Leu Lys Asp Asp	Val Leu Leu Leu Glu	
370	375	380	
Thr Arg Gly Pro Gln Asp Asn Arg	Ser Leu Cys Ala	Leu Glu Pro Ser	
385	390	395	400
Gly Cys Thr Ser Leu Pro Ser Lys Ala	Ser Thr Arg Ala Ala	Arg Leu	
405	410	415	
Gly Glu Tyr Leu Leu Gln Asp Leu	Gln Ser Gly Gln Cys	Leu Gln Leu	
420	425	430	
Trp Asp Asp Asp Leu Gly Ala	Leu Trp Ala Cys Pro	Met Asp Lys Tyr	
435	440	445	
Ile His Lys Arg Trp Ala Leu Val	Trp Leu Ala Cys	Leu Leu Phe Ala	
450	455	460	
Ala Ala Leu Ser Leu Ile Leu	Leu Leu Lys Lys Asp	His Ala Lys Gly	
465	470	475	480
Trp Leu Arg Leu Leu Lys Gln Asp	Val Arg Ser Gly	Gly Glu Trp Glu	
485	490	495	
Gln Ala Leu Gly Gly Pro Pro	Pro Gly Ser Gln Ala	Cys Ala Ser	
500	505	510	
Ser Pro Leu Pro Ser Pro Ser Val	Phe Ser Gly Ser	Gly Arg Gln Gly	
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<210> 161
<211> 2471
<212> DNA
<213> homo sapiens

<400> 161

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tgtgacgcgt	gcccggatca	gcagtca	cgcaccggcc	taccggcgt	gcggcccccgt	300
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aacgagtgc	acgccccaccc	ctgtttcccc	cgagttcgct	gtatcaacac	cagccccgggg	480
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gctttcgcca	aggccaaacaa	gcagggttgc	acggacatca	acgagtgtga	gaccgggcaa	600
cataactgcg	tccccaaactc	cgtgtgcattc	aacacccggg	gctccttcca	gtgcggcccg	660
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cccacgggtc	ctaacagtgc	ccaggaggac	tcagaccacg	atggccaggg	tgatgcctgc	1440
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cagctgcgga	acgctctgtg	gcatacagga	gacacagagt	cccaggtgcg	gctgctgtgg	2040
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<210> 162

<211> 757

<212> PRT

<213> homo sapiens

<400> 162

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								20		25				30		
Gln	Met	Leu	Arg	Glu	Leu	Gln	Glu	Thr	Asn	Ala	Ala	Leu	Gln	Asp	Val	
								35		40				45		
Arg	Glu	Leu	Leu	Arg	Gln	Gln	Val	Arg	Glu	Ile	Thr	Phe	Leu	Lys	Asn	
								50		55				60		
Thr	Val	Met	Glu	Cys	Asp	Ala	Cys	Gly	Met	Gln	Gln	Ser	Val	Arg	Thr	
								65		70				80		
Gly	Leu	Pro	Ser	Val	Arg	Pro	Leu	Leu	His	Cys	Ala	Pro	Gly	Phe	Cys	
								85		90				95		
Phe	Pro	Gly	Val	Ala	Cys	Ile	Gln	Thr	Glu	Ser	Gly	Ala	Arg	Cys	Gly	
								100		105				110		
Pro	Cys	Pro	Ala	Gly	Phe	Thr	Gly	Asn	Gly	Ser	His	Cys	Thr	Asp	Val	
								115		120				125		
Asn	Glu	Cys	Asn	Ala	His	Pro	Cys	Phe	Pro	Arg	Val	Arg	Cys	Ile	Asn	
								130		135				140		
Thr	Ser	Pro	Gly	Phe	Arg	Cys	Glu	Ala	Cys	Pro	Pro	Gly	Tyr	Ser	Gly	
								145		150				160		
Pro	Thr	His	Gln	Gly	Val	Gly	Leu	Ala	Phe	Ala	Lys	Ala	Asn	Lys	Gln	
								165		170				175		
Val	Cys	Thr	Asp	Ile	Asn	Glu	Cys	Glu	Thr	Gly	Gln	His	Asn	Cys	Val	
								180		185				190		
Pro	Asn	Ser	Val	Cys	Ile	Asn	Thr	Arg	Gly	Ser	Phe	Gln	Cys	Gly	Pro	
								195		200				205		
Cys	Gln	Pro	Gly	Phe	Val	Gly	Asp	Gln	Ala	Ser	Gly	Cys	Gln	Arg	Arg	
								210		215				220		
Ala	Gln	Arg	Phe	Cys	Pro	Asp	Gly	Ser	Pro	Ser	Glu	Cys	His	Glu	His	
								225		230				240		
Ala	Asp	Cys	Val	Leu	Glu	Arg	Asp	Gly	Ser	Arg	Ser	Cys	Val	Cys	Ala	
								245		250				255		
Val	Gly	Trp	Ala	Gly	Asn	Gly	Ile	Leu	Cys	Gly	Arg	Asp	Thr	Asp	Leu	
								260		265				270		
Asp	Gly	Phe	Pro	Asp	Glu	Lys	Leu	Arg	Cys	Pro	Glu	Arg	Gln	Cys	Arg	
								275		280				285		
Lys	Asp	Asn	Cys	Val	Thr	Val	Pro	Asn	Ser	Gly	Gln	Glu	Asp	Val	Asp	
								290		295				300		
Arg	Asp	Gly	Ile	Gly	Asp	Ala	Cys	Asp	Pro	Asp	Ala	Asp	Gly	Asp	Gly	
								305		310				315		
														320		

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 Arg Asn Thr Asp Glu Asp Lys Trp Gly Asp Ala Cys Asp Asn Cys Arg
 340 345 350
 Ser Gln Lys Asn Asp Asp Gln Lys Asp Thr Asp Gln Asp Gly Arg Gly
 355 360 365
 Asp Ala Cys Asp Asp Asp Ile Asp Gly Asp Arg Ile Arg Asn Gln Ala
 370 375 380
 Asp Asn Cys Pro Arg Val Pro Asn Ser Asp Gln Lys Asp Ser Asp Gly
 385 390 395 400
 Asp Gly Ile Gly Asp Ala Cys Asp Asn Cys Pro Gln Lys Ser Asn Pro
 405 410 415
 Asp Gln Ala Asp Val Asp His Asp Phe Val Gly Asp Ala Cys Asp Ser
 420 425 430
 Asp Gln Asp Gln Asp Gly Asp Gly His Gln Asp Ser Arg Asp Asn Cys
 435 440 445
 Pro Thr Val Pro Asn Ser Ala Gln Glu Asp Ser Asp His Asp Gly Gln
 450 455 460
 Gly Asp Ala Cys Asp Asp Asp Asp Asn Asp Gly Val Pro Asp Ser
 465 470 475 480
 Arg Asp Asn Cys Arg Leu Val Pro Asn Pro Gly Gln Glu Asp Ala Asp
 485 490 495
 Arg Asp Gly Val Gly Asp Val Cys Gln Asp Asp Phe Asp Ala Asp Lys
 500 505 510
 Val Val Asp Ile Asp Val Cys Pro Glu Asn Ala Glu Val Thr Leu
 515 520 525
 Thr Asp Phe Arg Ala Phe Gln Thr Val Val Leu Asp Pro Glu Gly Asp
 530 535 540
 Ala Gln Ile Asp Pro Asn Trp Val Val Leu Asn Gln Gly Arg Glu Ile
 545 550 555 560
 Val Gln Thr Met Asn Ser Asp Pro Gly Leu Ala Val Gly Tyr Thr Ala
 565 570 575
 Phe Asn Gly Val Asp Phe Glu Gly Thr Phe His Val Asn Thr Val Thr
 580 585 590
 Asp Asp Asp Tyr Ala Gly Phe Ile Phe Gly Tyr Gln Asp Ser Ser Ser
 595 600 605
 Phe Tyr Val Val Met Trp Lys Gln Met Glu Gln Thr Tyr Trp Gln Ala
 610 615 620
 Asn Pro Phe Arg Ala Val Ala Glu Pro Gly Ile Gln Leu Lys Ala Val
 625 630 635 640
 Lys Ser Ser Thr Gly Pro Gly Glu Gln Leu Arg Asn Ala Leu Trp His
 645 650 655
 Thr Gly Asp Thr Glu Ser Gln Val Arg Leu Leu Trp Lys Asp Pro Arg
 660 665 670
 Asn Val Gly Trp Lys Asp Lys Lys Ser Tyr Arg Trp Phe Leu Gln His
 675 680 685
 Arg Pro Gln Val Gly Tyr Ile Arg Val Arg Phe Tyr Glu Gly Pro Glu
 690 695 700
 Leu Val Ala Asp Ser Asn Val Val Leu Asp Thr Thr Met Arg Gly Gly
 705 710 715 720
 Arg Leu Gly Val Phe Cys Phe Ser Gln Glu Asn Ile Ile Trp Ala Asn
 725 730 735
 Leu Arg Tyr Arg Cys Asn Asp Thr Ile Pro Glu Asp Tyr Glu Thr His
 740 745 750
 Gln Leu Arg Gln Ala
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<210> 163

<400> 163
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<210> 164

<400> 164
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33178SEQLIST.TXT

<210> 165

<400> 165
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<210> 166

<400> 166
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<210> 167

<211> 1982

<212> DNA

<213> homo sapiens

<400> 167

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aggcgtcg	tgttttttc	aaggagctca	tacaggagtt	tgggatcggc	tacagcgaca	240
cagcctggat	ctcctccatc	ctgctggcca	tgctctacgg	gacaggtccg	ctctgcagt	300
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<210> 168

<211> 465

<212> PRT

<213> homo sapiens

<400> 168

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			20				25					30			
Gly	Phe	Ser	Tyr	Ala	Phe	Pro	Lys	Ala	Val	Ser	Val	Phe	Lys	Glu	
	35				40					45					
Leu	Ile	Gln	Glu	Phe	Gly	Ile	Gly	Tyr	Ser	Asp	Thr	Ala	Trp	Ile	Ser
	50				55				60						
Ser	Ile	Leu	Leu	Ala	Met	Leu	Tyr	Gly	Thr	Gly	Pro	Leu	Cys	Ser	Val
	65				70			75					80		
Cys	Val	Asn	Arg	Phe	Gly	Cys	Arg	Pro	Val	Met	Leu	Val	Gly	Gly	Leu

33178SEQLIST.TXT

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100 105 110		
Gln Val Tyr Leu Thr Thr Gly Val Ile Thr Gly Leu Gly Leu Ala Leu		
115 120 125		
Asn Phe Gln Pro Ser Leu Ile Met Leu Asn Arg Tyr Phe Ser Lys Arg		
130 135 140		
Arg Pro Met Ala Asn Gly Leu Ala Ala Gly Ser Pro Val Phe Leu		
145 150 155 160		
Cys Ala Leu Ser Pro Leu Gly Gln Leu Leu Gln Asp Arg Tyr Gly Trp		
165 170 175		
Arg Gly Gly Phe Leu Ile Leu Gly Gly Leu Leu Leu Asn Cys Cys Val		
180 185 190		
Cys Ala Ala Leu Met Arg Pro Leu Val Val Thr Ala Gln Pro Gly Ser		
195 200 205		
Gly Pro Pro Arg Pro Ser Arg Arg Leu Leu Asp Leu Ser Val Phe Arg		
210 215 220		
Asp Arg Gly Phe Val Leu Tyr Ala Val Ala Ala Ser Val Met Val Leu		
225 230 235 240		
Gly Leu Phe Val Pro Pro Val Phe Val Val Ser Tyr Ala Lys Asp Leu		
245 250 255		
Gly Val Pro Asp Thr Lys Ala Ala Phe Leu Leu Thr Ile Leu Gly Phe		
260 265 270		
Ile Asp Ile Phe Ala Arg Pro Ala Ala Gly Phe Val Ala Gly Leu Gly		
275 280 285		
Lys Val Arg Pro Tyr Ser Val Tyr Leu Phe Ser Phe Ser Met Phe Phe		
290 295 300		
Asn Gly Leu Ala Asp Leu Ala Gly Ser Thr Ala Gly Asp Tyr Gly Gly		
305 310 315 320		
Leu Val Val Phe Cys Ile Phe Phe Gly Ile Ser Tyr Gly Met Val Gly		
325 330 335		
Ala Leu Gln Phe Glu Val Leu Met Ala Ile Val Gly Thr His Lys Phe		
340 345 350		
Ser Ser Ala Ile Gly Leu Val Leu Leu Met Glu Ala Val Ala Val Leu		
355 360 365		
Val Gly Pro Pro Ser Gly Gly Lys Leu Leu Asp Ala Thr His Val Tyr		
370 375 380		
Met Tyr Val Phe Ile Leu Ala Gly Ala Glu Val Leu Thr Ser Ser Leu		
385 390 395 400		
Ile Leu Leu Leu Gly Asn Phe Phe Cys Ile Arg Lys Lys Pro Lys Glu		
405 410 415		
Pro Gln Pro Glu Val Ala Ala Ala Glu Glu Glu Lys Leu His Lys Pro		
420 425 430		
Pro Ala Asp Ser Gly Val Asp Leu Arg Glu Val Glu His Phe Leu Lys		
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Ala Glu Pro Glu Lys Asn Gly Glu Val Val His Thr Pro Glu Thr Ser		
450 455 460		
Val		
465		

<210> 169
<211> 2357
<212> DNA
<213> homo sapiens

<400> 169
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acaagcagca gctgctgagc catggctgaa gggaaatca ccaccttcac agccctgacc 180
gagaagttta atctgcctcc agggattac aagaagccca aactcctcta ctgtagcaac 240
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gaccagcaca ttcatcgca gtcagtgcg gaaagcgtgg gggaggtgta tataaagagt 360
accgagactg gccagtactt ggccatggac accgacgggc ttttatacgg ctcacagaca 420
ccaaatgagg aatgttgtt cttggaaagg ctggaggaga accattacaa caccatatata 480
tccaagaagc atgcagagaa gaattgggtt gttggcctca agaagaatgg gagctgc当地 540
cgccgtccctc ggactcacta tgccagaaa gcaatctgt ttctcccccgt gccagtctct 600
tctgattaaa gagatctgtt ctgggtgttg accactccag agaagttcg aggggtccctc 660

33178SEQLIST.TXT

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accctgcac	agtttagaac	agagggacca	aattgcttct	aggagtcaac	tggctggcca	840
gtctgggtct	gggttggat	ctccaattgc	cttgcagg	ctgagtcct	ccatgcaaaa	900
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tttgccttc	ctgtgccctg	caaataattag	caaagaagct	tcatgccagg	ttaggaaggc	1080
agcattccat	gaccagaaac	agggacaaag	aaatcccccc	ttcagaacag	aggcatttaa	1140
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<212> PRT

<213> homo sapiens

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<212> DNA

<213> homo sapiens

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<213> homo sapiens

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<211> 3119

<212> DNA

<213> homo sapiens

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<211> 2762

<212> DNA

<213> homo sapiens

<400> 174

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<211> 890

<212> PRT

<213> homo sapiens

<400> 180

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 Thr Thr Lys Ile Gly Gly Pro Ala Pro Ser Pro Ser Val Leu Asn Val
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 Thr Gly Val Thr Gln Ser Thr Met Phe Ser Cys Glu Ala His Asn Leu
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 Gly Cys Gly Pro Trp Ser Gln Pro Leu Val Val Ser Ser His Asp Arg
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 Ala Gly Gln Gln Gly Pro Pro His Ser Arg Thr Ser Trp Val Pro Val
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 Asp Ser Val Met Ala Arg Gly Glu Pro Ala Val His Phe Arg Ala Ala
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